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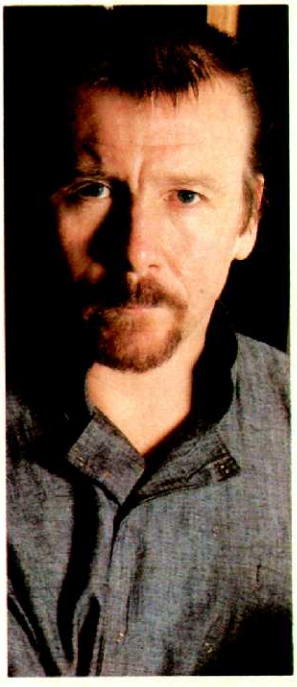

ELECTRONIC GAMES (ISSN 0730-6687)) is published monthly except for February, April, June, August by Reese Communications, Inc., 460 West 34th Street, New York, NY 10001. Second-class postage paid at New York, NY and additional mailing office.

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Single copy price, $2.95. Subscription rates: 12 issues, $28; Canada, 12 issues, $32; foreign, air mail only, 12 issues, $64, U.S. funds. Address subscription orders and correspondence to **ELECTRONIC GAMES**, P.O. Box 1128, Dover, NJ 07801 or call (201) 361-9550. Change of address takes 60 days to process; send old address label, new address and zip code. All material listed in this magazine is subject to manufacturer's change without notice, and publisher assumes no responsibility for such changes. Printed in the U.S.A.

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To Be or Not to Be— A Computer Owner

By ARNIE KATZ

Should I buy a home computer now," goes the most frequently asked question of 1984, "Or should I wait until a better one comes onto the market?" Although Americans purchased more than four million home computers last year — almost three million machines during the holiday gift-giving season alone! — as many or more consumers held onto their cash, at least partially due to the high expectations for such machines as the Coleco Adam, Apple MacIntosh, IBM PCjr., Atari 1450 XLD and Commodore 264 and 364.

Let's be honest: There's no way to give a blanket answer about whether this is the right time to buy a computer. Individual factors simply weigh too heavily in the equation.

There are, however, some questions worth pondering when trying to make your individual choice about whether to acquire a computer for entertainment and other purposes. Thinking about these things may help clarify your decision about joining the computer generation now — or delaying the move awhile longer.

1. All computers become technologically obsolete within a few years, maximum, of entering the market.

In the understandably intense quest for sales and profits, manufacturers tend to come to market with a new computer system whenever they can offer a unit that significantly outperforms existing rivals in one or more respects. The shopper must watch out for machines which slip back in other areas, because they become obsolete even faster, but prospective customers can generally feel safe about the fact that new computers are, in fact, generally an improvement on older ones.

2. A technologically obsolete machine can still be valuable. The Atari 2600 is a perfect illustration. Many videogame and computer systems surpass it in power and other features, but the standard programmable remains popular. Why? Because its games, though not state-of-the-art in most respects, are nonetheless fun.

3. Computers don't have to be perfect to be worthwhile. Waiting for the ideal machine will keep one out of your home for a long, long time. It's similar to the decision consumers had to make about TV sets in the mid-1960's. Some folks bought the black and white TVs available at the time, while others waited for color. And then waited some more for manufacturers to perfect color. And waited even more for big screen. And they're probably still waiting for high resolution picture and stereo sound.

It's the same way with computers. Today's systems aren't the last word, but if there's one that does substantially what you want it to do, further waiting probably isn't the best strategy.

4. Computers wear out. Figures on service life aren't available yet, but computers should eventually wear out, just like everything else from cars to couches. So when you buy a computer today, don't feel you're making a decision for all time.

The bottom line on all this is that while prudence is a great virtue for any would-be computer purchaser, there's such a thing as being overly careful.

Volume Two, Number Thirteen
July, 1984

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If you thought you'd never find fun games for your hardworking home computer, happy days are here. Because now ATARISOFT™ has all the great hits…Pac-Man,[1] Donkey Kong[2] by Nintendo;[2] Centipede,™ Defender;[3] Joust;[3] Jungle Hunt;[4] Moon Patrol;[4] Pole Position;[5] Galaxian;[4] Ms. Pac-Man;[1] and Battlezone.™

And we've got them for all the hit computers …Apple, IBM, Commodore 64, Vic-20, Colecovision;* and TI 99/4A. We've got Pac-Man, Centipede and Defender for Intellivision too.

So dust off your joystick and ask your dealer for all the ATARISOFT hits. It's the software your hardware's been waiting for.

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All the hits your computer is missing.

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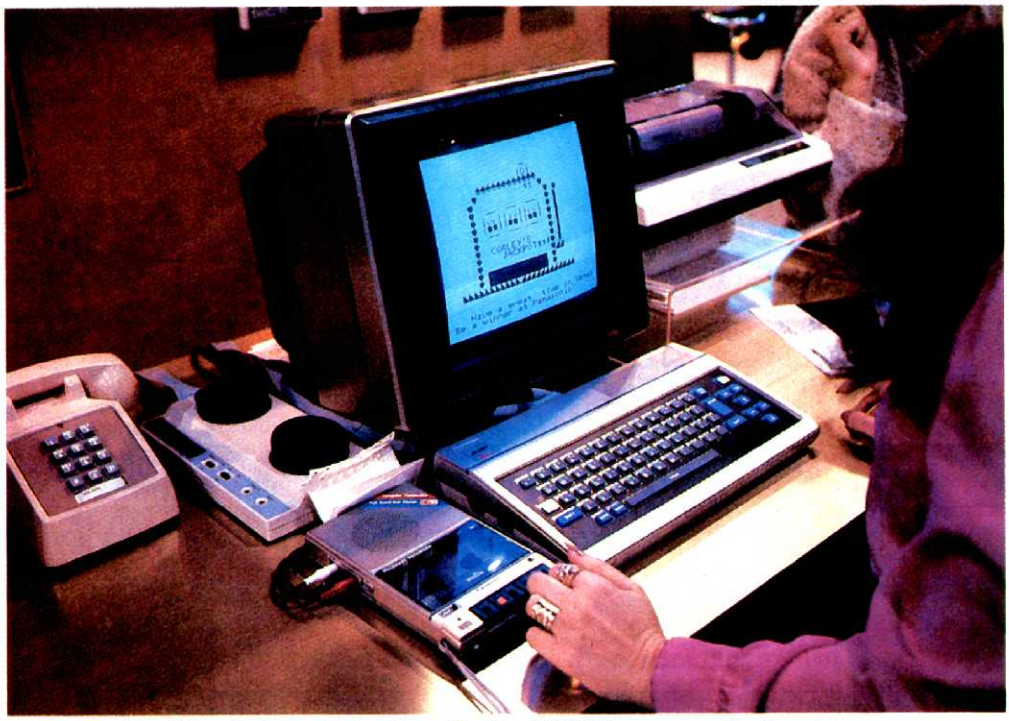
HOTLINE



Texas Instruments, Inc. is not leaving TI 99/4A owners out in the cold.

TI SUPPORTS 99/4A

Even though the company has exited the home computer market, Texas Instruments plans to continue to support the 99/4A. The company is seeing to it that the roughly 2 million owners of the system have plenty of software available, both from previously announced new titles from TI and from third-party software manufacturers. In some cases, titles announced earlier by TI will be turned back to the original developer for marketing. For example, Imagic will market the titles they developed for the 99/4A under their own label. Similarly, some games will be turned over to other companies — TI turned over to Sierra On-Line the rights to new 99/4A products developed by Walt Disney.

TI plans to honor all warranties for hardware and software, and to maintain service and exchange centers for out of warranty equipment for the indefinite future. All known TI owners will receive information, newsletters, catalogs and direct mail pieces to keep them informed of services, hardware and software available, and the company says that any owner who ever received mail from TI in the past is still on their list. New owners should send in their Owner Information Card, or name, address and 99/4A serial number, to: Texas Instruments, P.O. Box 53, Lubbock, Tx. 79408, to get the information and mailing from other suppliers about product availability and user groups.

Finally, TI is continuing its 6-day-a-week toll-free line — 1-800-TI-CARES, so that owners can get the help and advice they need.

TENEX OFFERS FREE BOOKS

Here's just the thing for new computer owners. The "Everything book for Commodore Home Computers", for C-64 and VIC-20 owners, and the "Everything Book For TI Home Computers" list over 500 programs and hundreds of compatible peripherals and accessories for each machine. To get a free copy of either ($2.95 value), write Tenex Computer Marketing Systems, P.O. Box 6578, South Bend, Indiana 46660, or call 1-800-348-2778.

ATARI ADVENTURE DEBUTS IN ST. LOUIS

The first Atari Adventure center opened at the Northwest Plaza Shopping Center in St. Louis, MO, and company officials at Atari say the center is "a unique alternative to the conventional entertainment center concept." Atari Adventure combines a high-tech video game room with a hands-on computer learning center and a special display of the latest game technology. The center features the Atari XL computer line in classroom settings and patrons can purchase time segments at work stations to balance checkbooks, do homework, word process, play games or use the machines in any way they wish. A full-time instructor is on hand at all times, and Atari promises that adventurers will get a chance to experiment with prototypes and other new electronic equipment. The Game Room section of AA is filled with what officials describe as the "newest and best in arcade video games from a variety of manufacturers."

ATARI TO MARKET ROBOTS

Atari has entered into an agreement with Nolan Bushnell to market a line of products from his new company, Androbot, Inc. One of the items slated for distribution is "Androman", a foot-tall robot that works with the Atari Model 2600. Players use the game controller to steer the robot, while watching the TV screen that serves as map of the obstacles in the room.

The National Coin Machine Institute is sponsoring Students Against Drunk Driving chapters.

NCMI ADOPTS ARCADE STANDARDS

The National Coin Machine Institute (NCMI) has adopted a set of requirements for arcade operators who want to be members of the NCMI Family Amusement Center Division. To qualify for the group, arcades must 1) maintain qualified attendants on duty; 2) keep arcades clean and orderly; 3) establish rules to control smoking, eating and beverage consumption on premises; 4) discourage loiterers; 5) permit no students in arcades during school hours; 6) permit no illegal activities nor gambling, and 7) operate no pornographic arcade games or devices.

In another move that should make arcade owners popular in their locales, NCMI approved sponsorship of Students Against Driving Drunk (SADD), urging members to back SADD chapters and activities in their communities. Currently over 6000 schools participate in SADD. "If our members can save just one life or prevent one accident . . we will have accomplished a lot," says Mel Grossberg, NCMI president. To get information about organizing local chapters of SADD, call the NCMI Hotline, 1-800-327-7724.

ICE CREAM, ROBOTS AND GAMES

Floridians can enjoy America's favorite desert while playing electronic games in John Phillip Tube Ice Cream Shops & Entertainment Restaurants. Four new restaurants featuring pizza, subs, beer, wine and a line of ice cream treats recently opened in Broward County, Fla., making a total of nine, with five more currently under construction and 13 additional franchises throughout the State. Each location features 50 or so coin-op games and a "robotic show" of robot musicians that serenade the diners in the new "entertainment restaurants".

SYNAPSE ADDS BRAINS TO GAMES

Synapse Software prexy Ihor Wolosenko promises games will see a greater use of machine intelligence in action games from that company. In the future, the arcader's on-screen representative may well have goals, tendencies and characteristic activities of its own apart from the instructions input through the joystick. Upcoming titles largely do away with difficulty levels. Instead the program adjusts to the approximate skill level of the player, even countering particularly successful human strategies by changing its mode of assault.

APPLE BAN HOLDS UP IN COURT

A federal judge in Los Angeles dismissed a suit brought by six mail-order computer firms that were trying to have the Apple ban on mail-order sales set aside. Apple prohibited such sales in 1981, saying there were no arrangements for customer education or services on computers sold through mail order ads. Judge Pamela Rymer ruled that the vendors had not presented sufficient evidence, so the Apple ban continues.

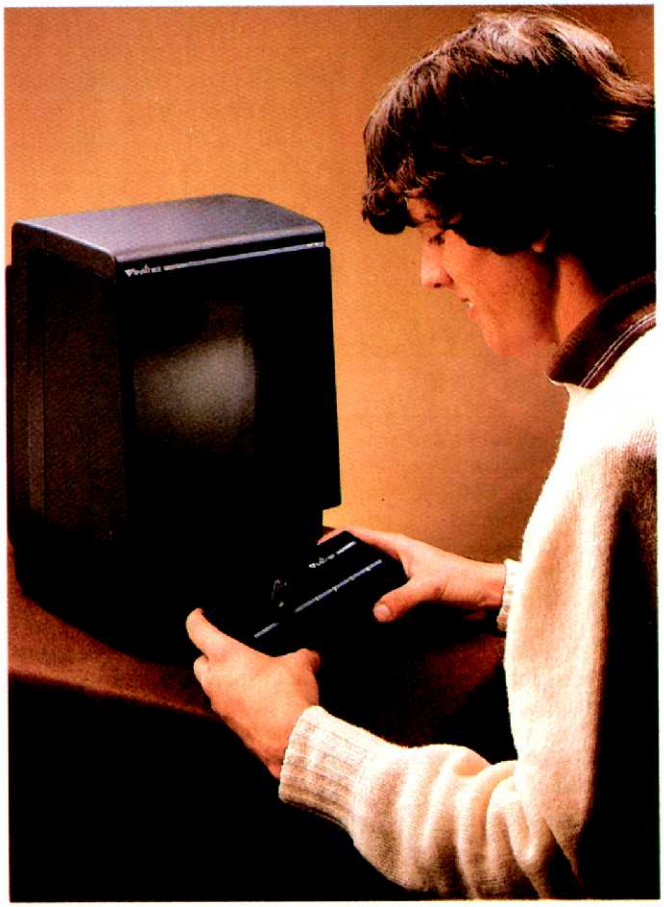
What this means is an end to all of the inexpensive, Apple clones.

A federal court has decided that an Apple by any other name is still an Apple.

HOTLINE

MILTON BRADLEY DROPS VECTREX

Milton Bradley Company, after counting up the losses experienced by the company during the past year, decided to discontinue production of the Vectrex videogame system. MB had purchased General Consumer Electronics (GCE), the company that developed Vectrex, in 1982 but by the time the system went into national distribution prices for videogames and computers had started to tumble. MB reduced the price of the Vectrex console to $100, but was unable to sell sufficient volume to make the Vectrex profitable at that price because of the high cost of producing the unit's built-in vectorscan monitor. The Vectrex console and its library of software titles will continue to be available until current inventories are depleted.



Vectrex has joined a long line of dead systems.

MATTEL EXITS ELECTRONICS

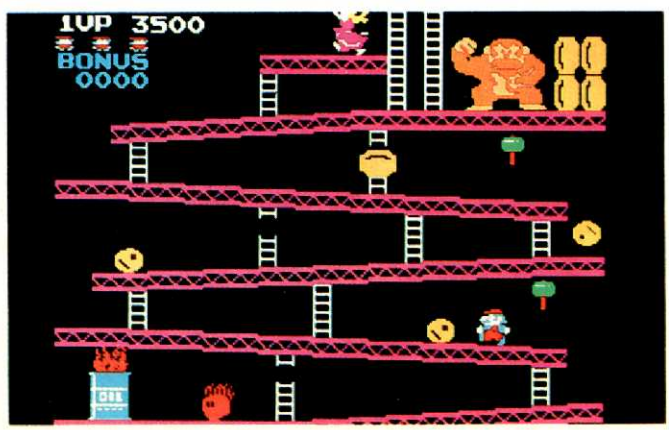
After totaling its losses for the past year, Mattel, Inc. is leaving the gaming industry to concentrate on its toy and hobby operations. The Intellivision videogame business and inventory has been sold for $20 million to a new company formed by Terrence E. Valeski, who had served as Mattel Electronics' senior vice president of marketing and sales, together with an independent group of investors. Mattel will continue to provide warranty and non-warranty service for Intellivision machines, and will also provide software assembly services to the new company for a one-year period.

According to Mattel officials, approximately 3 million Intellivision units were sold since the company started manufacturing the game console.

Earlier in 1984, Mattel had sold the marketing rights for the Aquarius home computer to Radofin Electronics, the producer of the system.

DONKEY KONG WHIPS KING KONG

Donkey Kong was the top ape in the recent court battle between Nintendo and Universal City Studios. The movie moguls claimed that *Donkey Kong* was a rip-off of King Kong, but the court agreed with Nintendo that Mario's nemesis is, indeed, a whole other kind of monkey than the one who carried Fay Wray to the top of the Empire State Building in the movies. Judge D.J. Sweet pointed to the differences between the comical *Donkey Kong* and sinister King Kong, saying that the game creates "a totally different concept and feel from the drama". He says that, "No reasonable jury could find likelihood of confusion" between the two apes. Judge Sweet went on to say, "At best, Donkey Kong is a parody of King Kong, but a parody. . .is not an infringement."

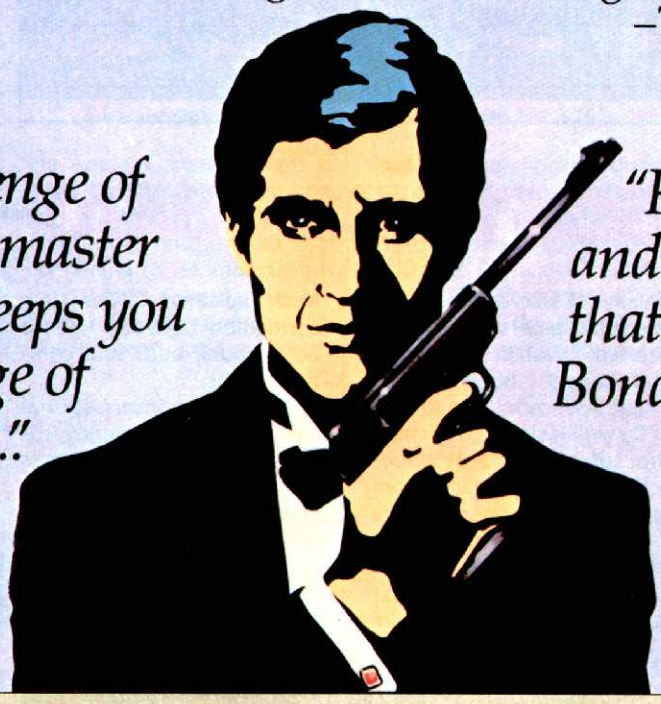


"Sensational, a real thriller... it's James Bond all the way."

"The action was so involving, it made me feel like the master spy himself."
–Rex Weed

"You'll feel like Bond as you out-shoot and outsmart the combined forces of evil..."

"The Bond 007 home video game is like reliving the Bond classics."
–The Daily Platter

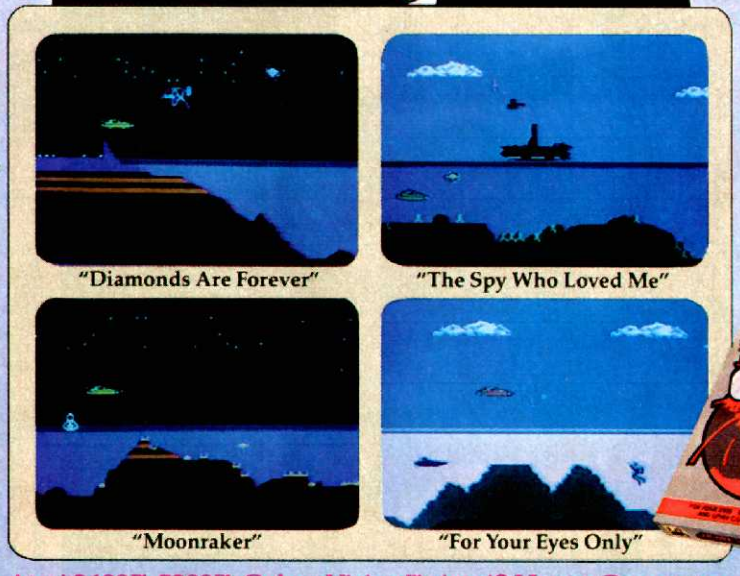


"The challenge of becoming master spy 007 keeps you on the edge of your seat..."

"One second you're hovering in mid-air dodging deadly satellites in the desert... the next you're plunged into the treacherous depths of the sea."
–The Rolling Pebble

"Four land and sea escapades that rival any Bond movie adventure..."

"If you loved *Diamonds Are Forever, For Your Eyes Only*, Moonraker* and *The Spy Who Loved Me*... wait until you see the Bond 007 home video and computer game."
–Boston Fleener



"Diamonds Are Forever"

"The Spy Who Loved Me"

"Moonraker"

"For Your Eyes Only"

Now available for Atari 2600™, 5200™, ColecoVision™, Atari® Home Computers and Commodore 64™.

PARKER BROTHERS

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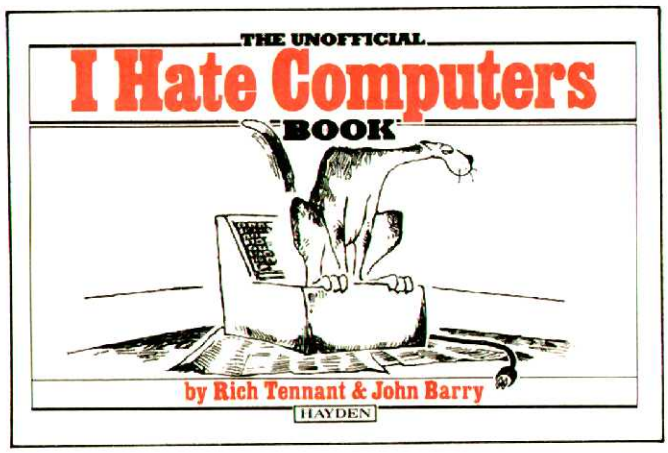
COMPUTER-PHOBE'S REVENGE

There's one in every crowd. Whether a person hates computers because of programming glitches, mixed-up computer billing, or just plain paranoia, Hayden has the perfect book for those of us who would like to "byte" back.

"The I-Hate-Computers Book" is a collection of one-panel cartoons that will put spiteful gleam in the eye of any computer-hater. The poor machines are shown being fed to a hungry ape, used as bedpans, practice baseballs, and just about any other humiliating situation imaginable. In spite of our obvious love of the gadgets, we couldn't help but smile.

HOTLINE



GLITCH FOILS DECATHLON CONTEST

Due to a recently-discovered glitch in the pole-vault screen of Activision's **Decathlon,** Championship Electronics has had to rewrite its contest rules outlined in the March Hotline section.

As a result of this unforeseen programming problem, which enables Olympic gamesters to reach virtually perfect scores every time out, Championship Electronics must now require that a photograph of every screen's final score, instead of one photo of the game's tally, accompany each application.

For further information, check the original details in the March 1984 **EG** Hotline section.

SOFTWARE BEAT

CBS has licensed the use of Mr. Rogers' Neighborhood for a line of educational computer games. According to CBS Software official Ed Auer, Fred Rogers will personally participate in the conceptualization and design of the games. . .

Simon & Schuster plans a series of adventure games based on Douglas Adams' "Hitchhiker's Guide To The Galaxy". S&S is committed to keep the same wacky, lighthearted flavor in the games that made the book a hit. . .

Isaac Asimov's "The Robots of Dawn" is slated to become the subject of a science-fiction adventure game from Epyx. When announcing the game-rights acquisition of the third novel in the trilogy of SF/detective stories by Asimov, Epyx president Mike Katz explained, "There is a correlation between science fiction book buffs and computer buffs.". . .

Adventure International has signed a 12-game, 10-year deal with Marvel Comics that gives AI access to all Marvel's current and past characters. The games, which will be produced on cartridge, disk and tape for virtually all popular home computers including the Apple, Atari, C-64 and Adam, will modify and adapt the Marvel characters as needed to fit them to the needs of the illustrated adventure game format. Marvel Comics will support the game effort by presenting a special series of comic books to tie into the AI titles. . .

The Incredible Hulk and friend delighted passersby at the Winter Consumer Electronics Show.

Synapse Software is bringing **Zaxxon** to the Commodore 64, according to an agreement with Sega Enterprises. *Zaxxon* sold over 150,000 copies in the Atari computer version, making it one of the top sellers of 1983. Synapse president Ihor Wolosenko promises "our version of *Zaxxon* will take full advantage of the excellent graphics capabilities of the C-64 machine". . .

MicroSparc promises their newest title, Hallowe'en, will bring thrills and chills to the 64K Apple. Compu-gamers lead a wizard through 10 screens, as he is bedeviled by pumpkins, spiders and skulls at every turn. Gamers can extensively redesign the contest to suit, varying sound, speed, point values, and the number of hostiles met on each adventure. . .

Parker Brothers turned to known hits for their new video/compu-games. **Gyruss,** based on the Konami coin-snatcher, lets the gamer

battle waves of alien ships as the captains the Gyruss space craft. **James Bond** lets players relive five adventures drawn from popular Bond movies. Two more games based on the Star Wars trilogy are slated: **Deathstar,** based on the climactic scene of Star Wars, is already in the stores, and a home version of the Star

DEATH STAR (PARKER BROS)

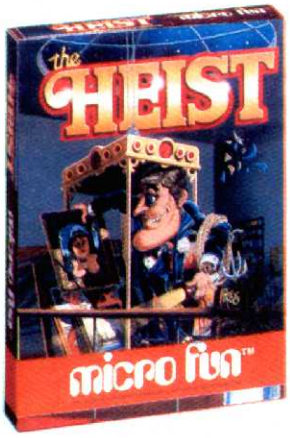
Wars coin-op will follow later this year. The games will be marketed for the Atari 2600, 5200, all Atari computers, ColecoVision, and Commodore 64. . .

The Heist, Micro Fun's newest strategy action game by Mike Livesay, has 90 different rooms on three levels for the Atari, IBM, ColecoVision and C-64, and 144 rooms for

The Heist **(Micro Fun) combines strategy with fast action.**

the Apple. Gamers control a good-guy spy who's removing all the art from the museum to find a micro dot containing secret information that should save the world. Gamers have to contend with drones, man-eating robots, death traps, locked doors, escalators, elevators and many other problems if the on-screen hero is to succeed. .

Davka Software is turning to the Old Testament for inspiration for the Bible Action Series. The arcade-style com-



puter games turn these 3000-year-old adventure stories into high-tech fun. The first titles in the series are **Samson & Delilah** — the strong man is imprisoned in the Philistines' temple, harrassed by guards and Delilah's flaming scissors — and **Jericho,** wherein players avoid the arrows of an army of bowmen and use Joshua's horn to make the walls tumble down. The games boast exotic settings, original music and multiple skill settings. . .

HARDWARE BEAT

A disk drive will soon be available for owners of Coleco's Adam computer system.

Apple unveiled the long-awaited Macintosh, a 32-bit, 64K ROM, 128K RAM package that includes a 9-in. black-on-white display, built-in disk drive, sound and speech hardware, keyboard, a mouse (small pointing device) two serial ports, and accessories kit, for $2495. . .

Coleco announced that it will market a disk drive for use with the computer. The double-density, double-sided drive will retail for under $400, and Coleco also plans to market pre-formatted disks for use with the new drive. Coleco also plans a second data storage drive, a 300/1200 baud modem, tractor feed for the printer, and a 64K memory expander for the Adam. Also on the drawing board are two add-ons: a module to permit the Adam to run compatibly with the IBM-PC, and another to facilitate the play of laserdisc games on the system. . .

Discwasher has its first computer accessory products ready to market. The "Calling Four" game port expander for the Apple II eliminates the need to expose the innards of the Apple each time the gamer wants to connect a joystick or paddle. "Clean Runner", a maintenance product, helps the computerist clean up disk drives through a step-by-step process that reportedly reduces "read" errors and prolongs the drive's life. . .

Commodore officials say the company will delay production "indefinitely" of the new models 264 and 364 computers. The new systems, which are slated to have some enhancements that make them good for applications-or programming-oriented users,

were originally scheduled for delivery early in 1984. However the company has decided to postpone the machines, at least till later this year. The C-64, which sold over one million systems in its first year, will continue to receive the focus of the company's attention for the indefinite future. . .

A mime with something to shout about.

Verbatim, a long time supplier of blank floppy disks, is the latest company to take dead aim at the developing market for computer merchandise in discount and department stores. Verbatim's new ValueLife line will be priced and packaged to sell in outlets where a minimum point-of-sale support is available. . .

Watch this space for details about the new Lorraine computer from Amiga. . .

HOTLINE

METHODIST HOSPITAL JOUSTS WITH SICK

Saying that the hospital maintains a policy of "attending to the total needs of its patients", Methodist Hospital, Indianapolis, In., is placing coin-op games in the Children's Pavilion. A **Joust** machine has been put on free play for the sick kids, in a program that hospital spokesmen hope will make conditions more pleasant for patients. The Joust game was donated by Modern Vending, M.V.S. Amusements, and Williams Electronics.

CHIPS & CHANGES STARTS 2-YEAR TOUR

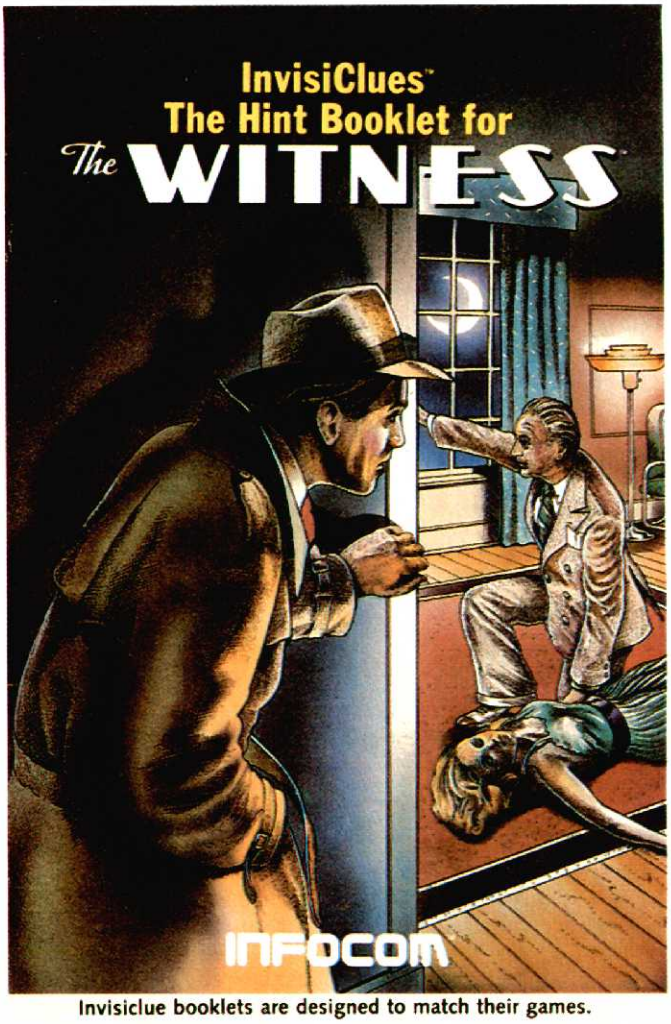
"Chips & Changes", the first travelling computer technology show, opens on March 14 at the San Francisco Exploratorium. The show not only features exhibits of computer technology, but also explores "its contemporary cultural ramifications" by combining hands-on and computerized interactive exhibits, robotics, live demos, and various presentations organized by the Assoc. of Science & Technology Centers. The show will travel to nine major American museums between now and 1986, including science museums in Oregon, Texas, Minnesota, Illinois, Massachusetts, Pennsylvania and North Carolina.

CONSUMER BEAT

A line of 24 games for the Atari 2600 is being marketed under the "Hot Shot" label by Goliath Industries. The games were designed in the Far East, packaged in West Germany, and are targetted to retail in the $6.99-$8.99 range. The company promises a similar budget-priced line to serve the ColecoVision market later this year. . .

Now consumers can get hint books and game maps for all 10 Infocom adventures, for $7.95 per packet, directly from the company. The "InvisiClues" hint books give helpful suggestions printed in invisible ink. The gamer rubs the clue needed with the special "InvisiClue" pen that comes with the enhancement package that also includes maps to help gamers find their paths through the adventure worlds. See "Readers Replay" for information on how to order. . .

The Jay Gee Programming Co. will refund the price (less tax and handling) of **Devil's Dare** to any gamer who can beat the game three times in a row in one-player mode at top skill level, within the first ten days after purchase. Do this, and a secret 10-digit code appears on screen. The company will send the refund upon receipt of the code and proof-of-purchase. . .



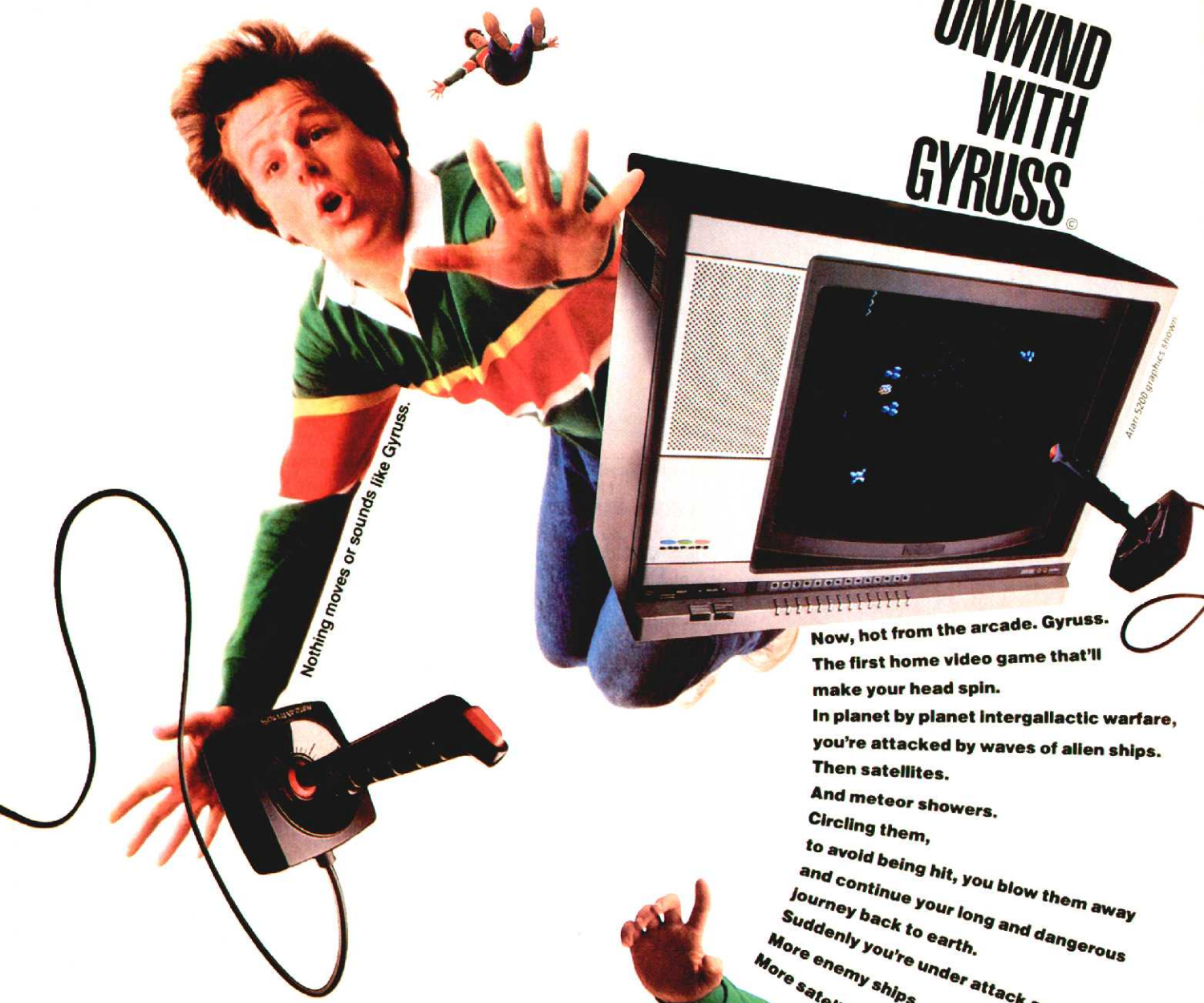
Invisiclue booklets are designed to match their games.

TEEN DEFEATS CAMEL ATTACK

Soren Kaplan, 14, Walnut Creek, Ca. was the victor in the "Attack of the Mutant Camel" contest sponsored by HES (Human Engineered Software), KMEL FM radio, and San Francisco Bay Area Record Factory stores. Kaplan was one of six gamers qualifying for the finals. He emerged as the champion camel herder with 117,522 points, winning the grand prize of a week's vacation at the Camelback Resort in Arizona for himself and a friend. The other five finalists each received a Commodore 64 computer and 10 HESware programs.

Kaplan said he hadn't known about the contest until a friend, Jeff Gilbert, bought the cartridge and encouraged him to enter the competition, so Kaplan plans to take his buddy along on the free vacation.

UNWIND WITH GYRUSS©



Now, hot from the arcade. Gyruss.
The first home video game that'll make your head spin.
In planet by planet intergallactic warfare, you're attacked by waves of alien ships.
Then satellites.
And meteor showers.
Circling them,
to avoid being hit, you blow them away and continue your long and dangerous journey back to earth.
Suddenly you're under attack again.
More enemy ships.
More satellites.

More meteors.
Faster and more dangerous. You're head is spinning as you continue on guts and reflexes.
But do you have what it takes to make it all the way back?
Play Gyruss, the more "hyper" space game.
It flies circles around all the rest.
For the Atari 2600, Atari 5200, ColecoVision, Commodore 64 and Atari Home Computers.

PARKER BROTHERS

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Electronic Games
460 West 34th Street
New York, N.Y. 10001

Reader's Replay

Whether you own an Atari 5200 (left) or a ColecoVision (below), you own one of the best videogame systems around.

THE GREAT DEBATE CONTINUES!

I would like to reply to Ashok Penmatcha's letter in your January issue. First, Ashok commented on the ColecoVision's controllers. Here are just a few of the words used in EG columns to describe the 5200 controllers: "Awful," "horrendous," "dead fish," "unbeatable handicap." ColecoVision's controllers may not be great, but there are spectacular alternatives including the Prostick III, Wico's ColecoVision joystick, etc.

As for objects flickering momentarily, I don't know of any home system that *doesn't* (take a look at **Wizard of Wor** for Atari).

The "Supersystem"? They should have called it the *"Stupidsystem"!*

Donald Richter
Freehold, NJ

I read your recent article comparing the two "super systems" with great interest. As an owner of both the ColecoVision and the Atari 5200, I feel uniquely qualified to comment.

First of all, both are special and outstanding in many ways, but to make a choice between them, two things must be considered. As you indicated, how suitable the cartridges available are to the individual's taste is important. Let me emphasize *available*, as projected games have a way of disappearing in this industry.

More important is the service support system. I have found Atari service, although expensive, to be quick, reliable, and accessible.

ColecoVision service, on the other hand, has been a disaster. When my system broke down, I tried for three days (unsuccessfully) to reach their 800 number. At other places I was told "It will take twelve weeks to send back to the factory," "No one services them," and "Coleco won't send my parts." I had to drive fifty miles (one way) to find a place that takes them and two weeks later I'm still waiting.

Michael J. Sergeant, M.D.
Kankakee, IL

Though I risk running this issue into the ground, I'd like to take an *objective* look at the ColecoVision/5200 debate. Obviously, each dominates in its own areas: CV **Congo Bongo** looks to outdo 5200 **Kangaroo**, while **Xevious** could just blow **Zaxxon** away! Though I own a ColecoVision (shouldn't 'a said that!) I see no reason why some CV and 5200 owners can't keep objective views and civil tongues. Come on, be realistic! Both systems' controls bit the dust!

Brian Simms
Glenwood, MD

Ed: All right, now everyone's been given a say in the Great Debate! Just a short word about the controllers for both systems: Several companies are making 5200 adapters for any 2600-compatible nine-pin joystick. Among them: High Score, of Long Beach, CA; GIM Electronics, of Carle Place, NY; and Newport Controls, of Los Gatos, CA. ColecoVisionaries might want to check out the Fire Command 4-button model, the Amiga ColecoVision keypad/stick, or the aforementioned Wico ColecoVision model. As far as servicing equipment goes, Atari and Coleco vary in speed and service, depending on the individual area.

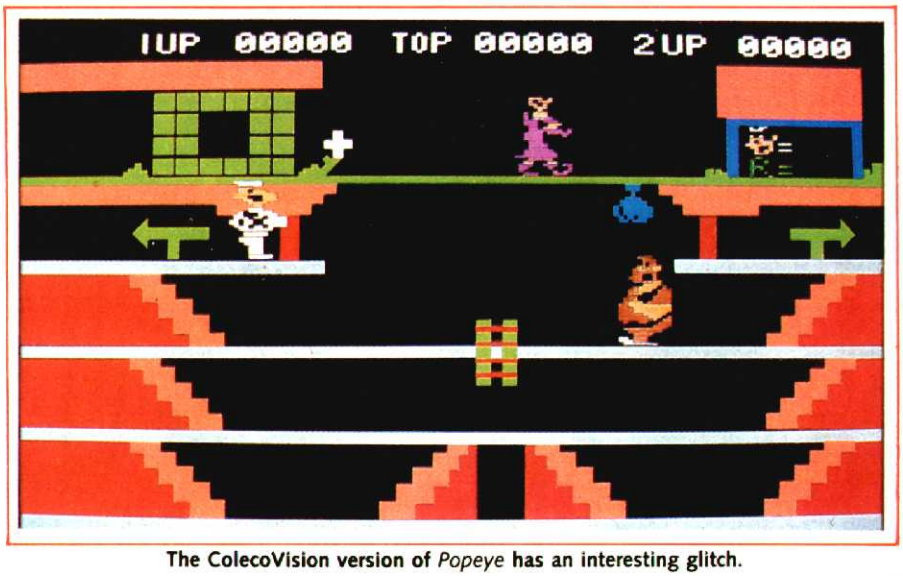
Can we all be friends again? After all, whether you own an Atari VCS, Intellivision, ColecoVision, 5200 Astrocade, or home computer, you're a member of a special and elite club: electronic game enthusiasts!

WAITING FOR AN ANSWER

I have written twice asking if you would send me some info on the Adam computer. I've been anxiously awaiting your letter and have been reading your magazine every month, but never got an answer. I read your magazine anyway because I love it! But this time, could you write back to me?

David Ryan
Milledgeville, GA

Ed: Although we read each and every letter that comes through our offices, if we took the time to answer them all, we'd never have time to write the magazine! We try to pick a group of letters that represent the most writers, then answer them in this column. We're sorry, David, and all you readers who ask for letters back or special information, but we just can't always find the time. But keep writing, 'cause if you don't, we can't accurately gauge your needs.



The ColecoVision version of *Popeye* has an interesting glitch.

GLITCH OF THE MONTH

Here's how to keep Bluto spinning around the screen while you catch notes on screen 2 of **Popeye** for the ColecoVision.

First, set up a situation where you're right in front of the spinach. Wait until Bluto crouches down to jump on you. Grab the spinach. If all goes well, he'll jump and you'll be right on his tail. Don't touch him — just follow him to the jumping board with Wimpy on it. Just as Bluto jumps on the board, hit him by jumping on it too. If your timing was right, Bluto will hit Wimpy while he bounces up. He'll then keep spinning across the screen while you get the notes!

It lasts until Popeye collects all the notes or dies from being it by a bottle.

Bill Dieck
West Friendship, MD

Ed: You just earned yourself a Paxxon Pac-Man wall clock! And stay tuned for an entire feature devoted to the quirks, glitches, and strange happenings **EG** *readers let us know about!*

IN SEARCH OF INVISICLUES

I read your article on "The Challenge of Zork" and was wondering if you could give me information about how I could get the Invisiclue booklet and map.

Chris Nelsen
Lakewood, CO

Ed: You and a few hundred other home arcaders, Chris!

Since the article was written, Infocom decided not to include an order form in the game package itself, and eliminated the two-tier pricing system as well.

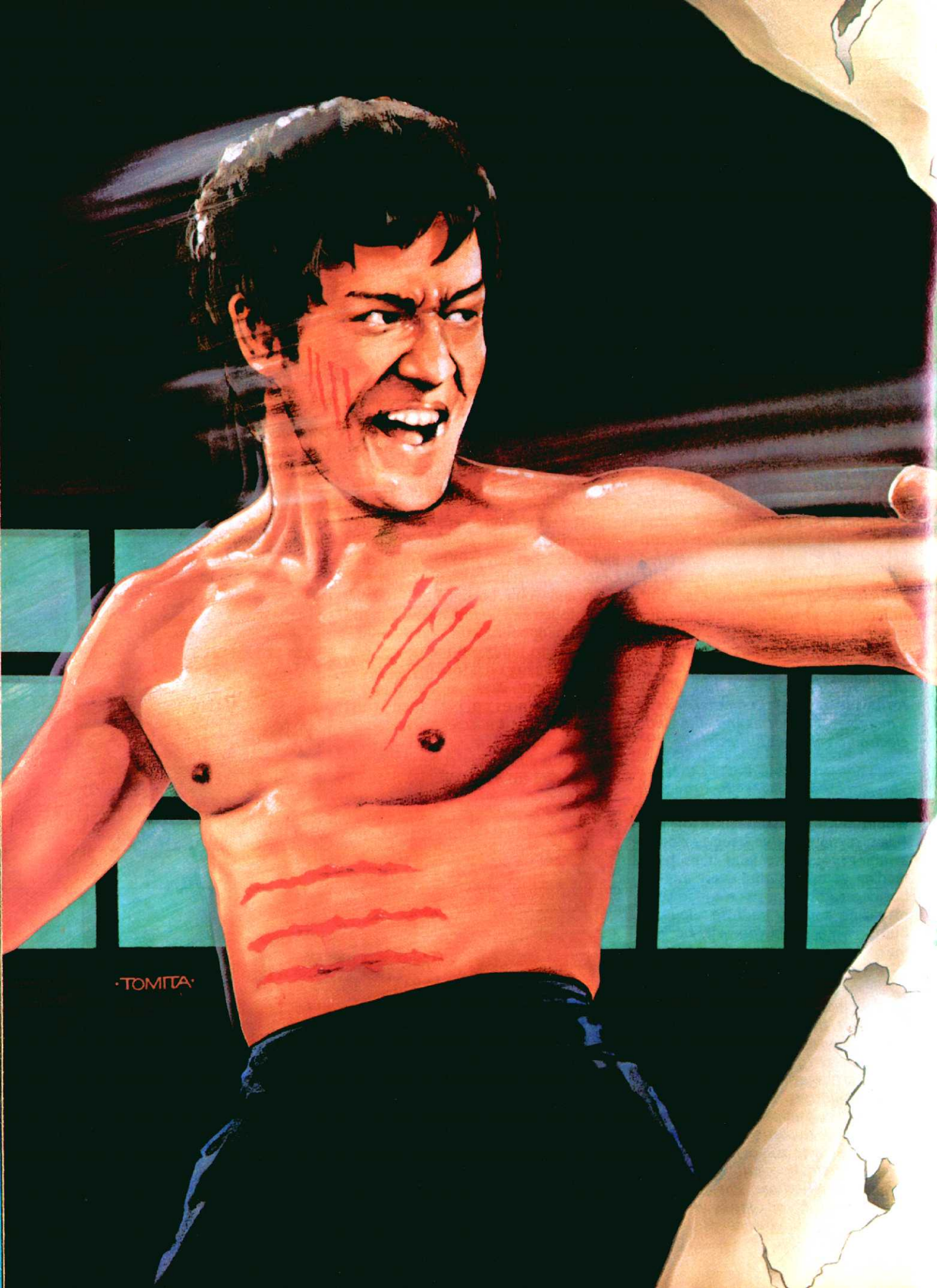
To order Zork Invisiclues (or help booklets for other Infocom games), you can either call 1-800-262-6868 (in New Jersey, call 800-238-2200) or send a check or money order to Infocom, PO Box 855, Garden City, NY 11530. When ordering by mail, be sure to specify which game's hints you want (they include **Zorks I, II, III, Enchanter, Deadline, Witness,** *and* **Suspended).** *The Invisiclue packages cost $7.95 apiece, including shipping and handling.*

MAIL ORDER UPDATE

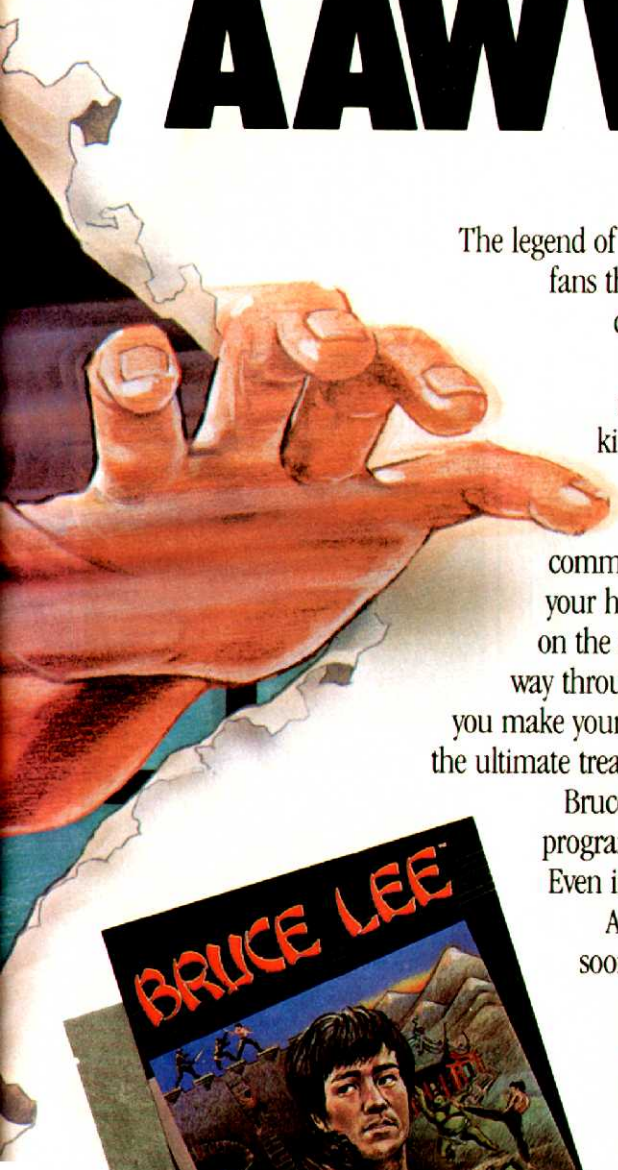
It appears that I'm not the only one who was cheated by the National Video Exchange! In your next edition of **EG,** please advise your readers that mail-order complaints should be sent to the Postal Inspector, P.O. Box 30456, Los Angeles, CA 90030-0456, Attn: Ross Casados. Perhaps in this way, the postal authorities will open an investigation on this company.

Nicholas D'Angelo
Shrewsbury, MA

Ed: Excellent suggestion, Nicholas. Maybe the Post Office will have better luck than we have in tracking down the bounders!


·TOMITA·

AAWWIIIIEEE!



The legend of Bruce Lee lives on in the imagination and memory of millions of fans throughout the world. And now, through the awesome power of the computer, you too can relive the power of Bruce Lee.

Bruce Lee™ combines state-of-the-art technology with the masterful moves of the martial arts. From devastatingly lethal kicks and staccato thrusts to the unrestrained fury of every reflex, the Bruce Lee game explodes with action.

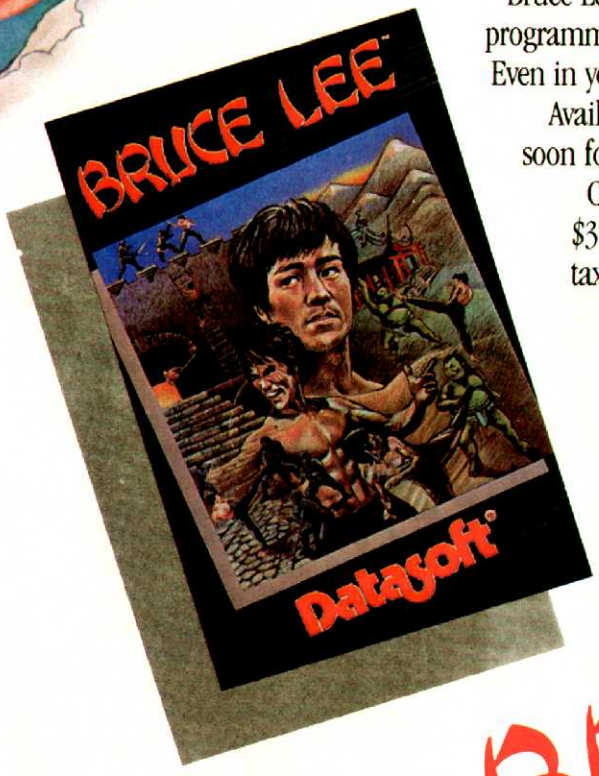
All the force and controlled discipline of Bruce Lee is at your command. You'll see it in his smooth and graceful leaps. You'll feel it in your heart as you prepare to do battle with his ominous adversaries. Take on the Green Yamo and Ninja in hand to hand combat as you fight your way through 20 mysterious oriental settings. Unexpected dangers loom as you make your way past exploding bushes and the fire wizard in your quest for the ultimate treasure.

Bruce Lee. It not only lives up to the expectations of the best programmers and players around. It lets you live out the life of a legend. Even in your spare time.

Available now for Atari and Commodore 64 Computers, coming soon for the Apple II series and IBM PC and PC/JR.

Contact your local dealer or send check or money order with $3.00 postage and handling. California residents add 6.5% sales tax to Datasoft.

Suggested retail $34.95.



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DO EDUCATIONAL GAMES REALLY TEACH?

Are Fun and Learning Really Compatible?

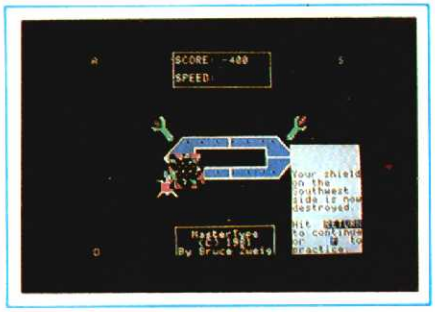
By VINCENT PUGLIA

Plato once said, "Avoid compulsion and let your children's lessons take the form of play." Good advice, that. Or is it?

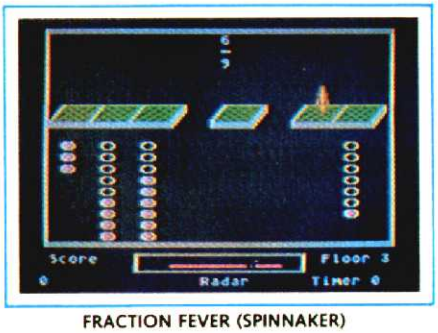
Years ago, the idea of combining education and games was unknown. Learning was serious business, and if the student tried to make light of it, the teacher was always willing to assign a thousand-word punishment essay.

Today, things have changed. The educational system appears to be failing, with one out of every five Americans classified as a functional illiterate. The power of the computer has made the question of including games in educational software much less theoretical.

Witness the recent flood of educational games. There are games that teach typing (like Sirius' **Type Attack** and Scarborough's **Master Type**), math (Spinnaker's **Fraction Fever**), grammer (AEC's **Matchmaker Grammar Word Use Skills**), and business management (Scarborough's **Run For The Money**), to name only a few. It seems as though every software publisher has simultaneously decided that education will be the next big "fad". Many of these new educational programs are quite good, but many programs that might have died a quiet death because they lacked a good play mechanic are being reincarnated as educational games.



MASTERTYPE (SCARBOROUGH)



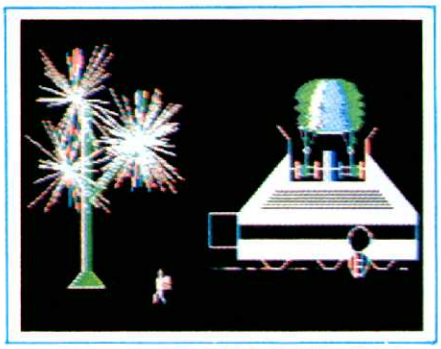
FRACTION FEVER (SPINNAKER)

THE MATCHMAKER LEARNING SERIES (AMERICAN EDUCATIONAL COMPUTER)

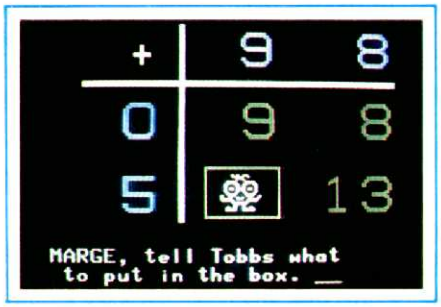
Ask one of the publishers of these so-called educational programs what the game teaches, and the most common answer is, "Directions and problem-solving." A funny thing about those two skills—almost all electronic games deal with directions and problem-solving. Take **Pac-Man.** A gamer has to master directions before solving the problem of avoiding the ghosts. Yet, neither Bally nor Atari claim *Pac-Man* is educational. They don't have to, the game is excellent on its own merits — entertainment.

If it's handled right, though, problem-solving can be a valid teaching goal for an educational program. It all depends on whether such teaching is the objective or just an excuse.

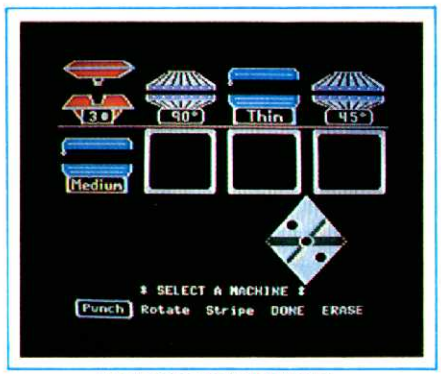
Sunburst Software, whose **Teasers by Tobbs** and **The Factory** have won awards, plans its objectives beforehand. According to the chief designer, Marge Kosel, "Objectives are decided in the design phase, then the program is tested in a classroom or with



IN SEARCH OF THE MOST AMAZING THING (SPINNAKER)



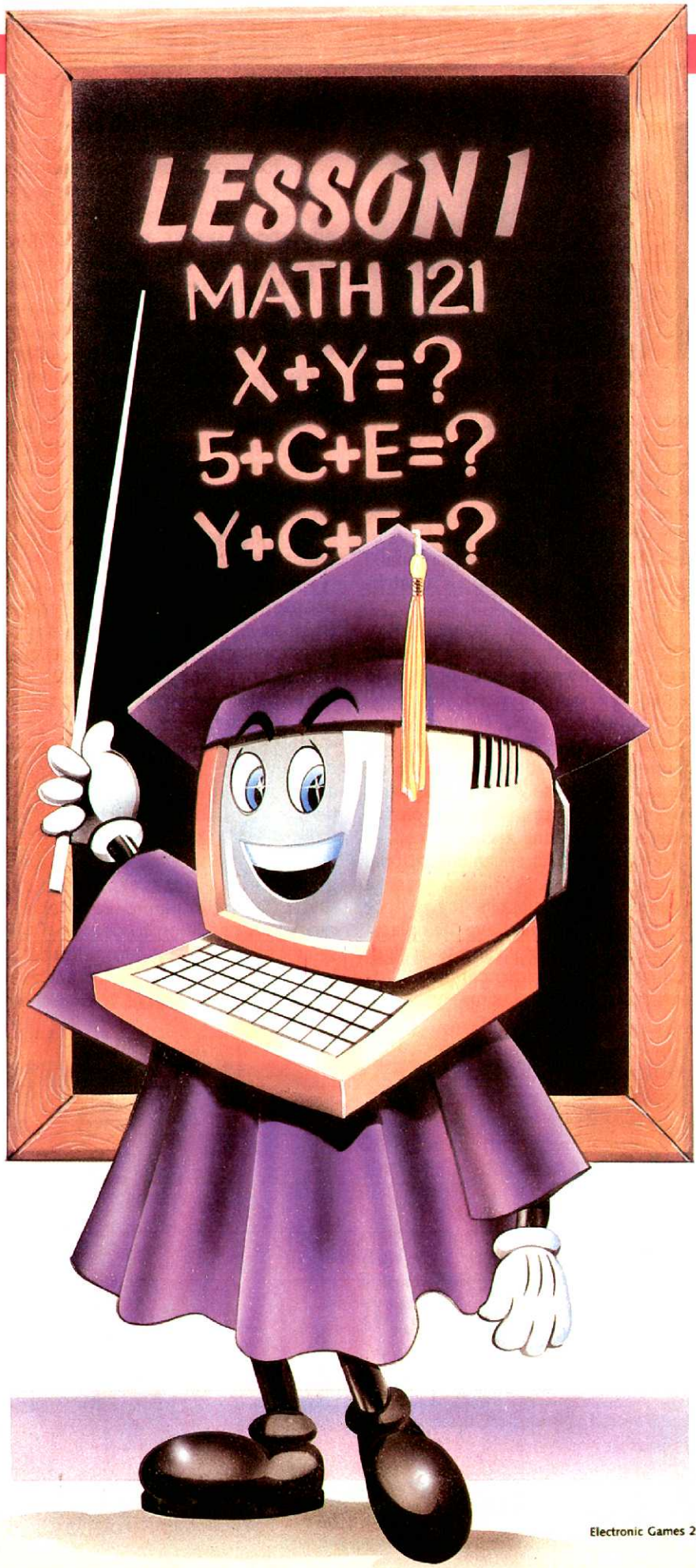
TEASERS BY TOBBS (SUNBURST)



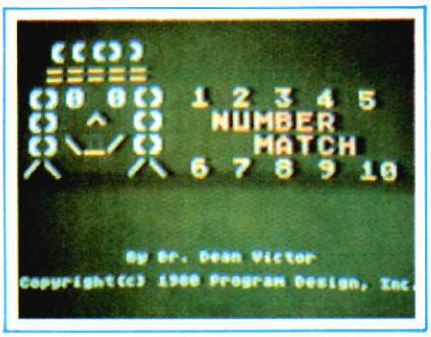
THE FACTORY (SUNBURST)

teachers and kids in an informal setting. Being a supplementary publisher, we try to teach skills, like problem-solving, which aren't usually taught in schools. We teach problem-solving just as you would teach mathematics."

Sunburst is not the only company whose educational software deals with problem-solving. Many of Spinnaker's products, especially those created by Tom Snyder, have problem-solving at their core. Consider **In Search of the Most Amazing Thing.** Because the game is designed as an adventure, the gamer is required to solve problems quite frequently. Among other things, he or she must decide at what price to sell certain items and which approach would be the most effective for each of the va-



EDUCATIONAL GAMES



PRESCHOOL IQ BUILDERS II (PDI)

rious cultures met along the journey.

Many educators, however, contend that Snyder's programs rely heavily on intrinsic learning. In fact, some software publishers feel that only those skills which can be tested and evaluated should be called "educational." For them, intrinsic learning is a catch-all phrase.

John Victor, whose company, Program Design, Inc., makes **IQ Builders I and II** and **The Adventures of Oswald** (a narrated computerized storybook for preschoolers) says, "Intrinsic learning doesn't have to be defined and requires no educational discipline on the part of the user or the designer. I don't believe in the Dewey approach. I believe in more drill and practice."

Tom Garsh of American Educational Computer agrees. "Drill and practice includes mastery of skills. It has rigor and discipline. Games have their place, but there's nothing wrong with rigor and immediate reinforcement." Interestingly enough, some of AEC's programs, such as **Matchmaker Spanish,** include arcade-like games as a reward for successfully completing the lessons in the software. Garsh is also deeply concerned about the failure of educational system and sees computers as an alternative for parents.

Eduware, which publishes a variety of educational software including **Rendezvous, Compu-Read** and **Counting Bees,** takes education seriously. Its co-founder, Sherwin Steffin, believes many software publishers, such as Spinnaker, are marketing as educational many programs which should be classified as games. He believes that such companies are focusing their efforts on marketing and packaging, and ignoring the 'real' educational content.

According to Steffin, "The chief problem with educational games (such as Spinnaker's) is that the instructional goals are unclear. Because of that, they cannot be evaluated and it's uncertain whether the goals have ever been achieved."

Steffin also feels that because the objectives are split between education and entertainment, the games cannot be very good as instruction nor as games. As a result, consumers are going to be dismayed when the programs don't deliver as expected. As he says, "Other companies see entertainment as a condition for learning. We see motivation coming from the act of learning itself, the sense of achievement. In arcade games the skills are intrinsic and can't be measured. How do we know they (the users) learned anything?"

He also says, "The problem with developing educational games is that they're not re-entryable. The user has very little incentive to go back. Even as games, the consumer is not getting value for his money."

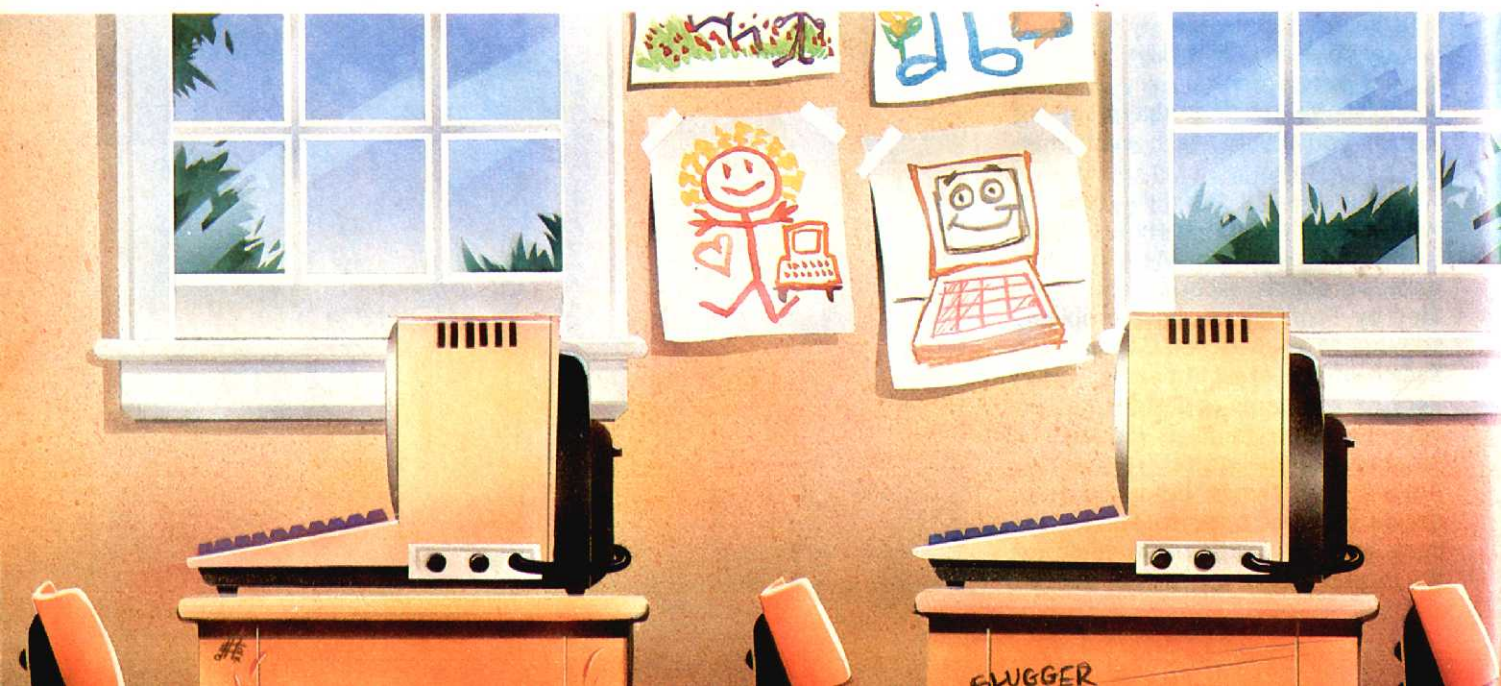
David Seuss of Spinnaker points out that each of their educational games get a minimum of 30 hours of playtime. "We have a high repurchase rate," he says. "In fact, many of our customers have better than two of our products."

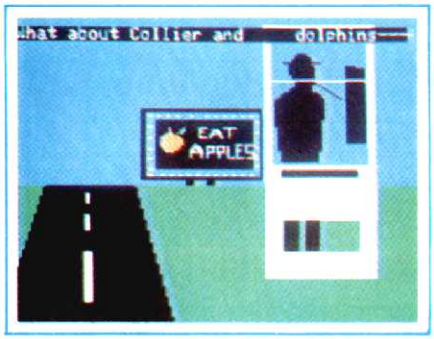
With regard to the effect of marketing on consumer buying. Seuss says, "Our packaging communicated to consumers that there's something of value here, and that they should try it out. But, marketing doesn't make the second purchase, only value does."

"Sherwin Steffin is allowed to have his opinion," Seuss says, "but you must remember his background. Some people are manufacturing for a school environment. Others are gearing up for the home market. As a result, they have different approaches."

"Think of a classroom. The major activity is drill and practice — I like to call it 'dull and practice.' The software assumes the presence of a knowledgeable person, such as a teacher." Seuss adds, "The entertainment content is sacrificed for the educational content. The child can't choose what he's taught, nor how. At home, it's different. If it doesn't make it as a good game, then it doesn't get used."

Another thing Seuss believes is that educational games shouldn't have





SNOOPER TROOPS (SPINNAKER)

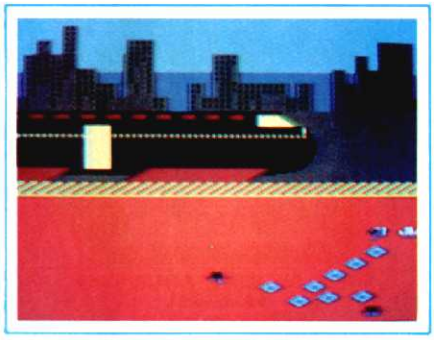
specific curriculum-oriented objectives. "Many skills are required in life. For example, notetaking, decision making, and problem solving. So, we include those things in our games. It's a little truer to life and the child enjoys it more. Terrific graphics and music are necessary to encourage kids to use the program."

Tom Snyder, whose **Snooper Troops** (Spinnaker) is acclaimed by many as an excellent educational game, is the iconoclast of the group. He believes that, "the game really comes first" when designing an educational program. He points out that if designers want to find validated educational programs they need only look at culture. As he says, "Baseball is Mother Nature's way of coming up with a game to teach averaging." His *Run For The Money* is perhaps the best example of what he means about finding educational games in culture. During play, the gamer has to learn how to use graphs, surveys and accounting spreadsheets. Tom also asserts that the user shouldn't rely on the computer for everything in his **Agent -U-S-A-** (available through Scholastic, Inc.), the gamer has to refer to printed maps. "Sure, the computer could display that," Tom says, "but then the learning would be locked within the context of the computer. This way the gamer can carry away what he's learned."

So, how does a buyer decide if the so-called educational game is educational? Marge Kosel may have an answer. She says, "We have certain rules. If it improves hand/eye coordination, it's a pure game. If all it has is feedback and interactivity, it's drill and practice. Our stuff has to do more than that." She says that Sunburst's programs stress thinking and analyzing. "We don't use timing in our programs. A child needs 'think time'. A game has time to react, not think."

Tom Garsh feels that the criteria should be "achieve first, games second." According to him, most of AEC's programs are curriculum-related because "grades is what counts." For that reason, when memory constraints require a choice between content and "fluff", the graphics are the first to go.

John Victor feels that the user of an educational game should show improvement. It should answer the question "What can the person do afterwards that he couldn't do before?" PDI, he says, tested its software with standarized tests, and the results showed mastery was achieved. He doesn't approve of Beta Site testing because "If you gave programs to them (the testers), they're predisposed to like them because they (the programs) are free."


AGENT -U-S-A- (SCHOLASTIC)

Sherwin Steffin takes a harder line. He believes if it hasn't been tested, regardless of whether it's good or not, then it probably shouldn't be termed educational. He includes his own Dragonware line in that assessment. Although the programs follow good instructional practices, Eduware makes no formal claims as to their educational value because they were not tested in a formal environment.

He does say, however, that good CAI (Computer Aided Instruction) programs teach far more effectively than any other media.

So, *do* educational games really teach? That depends on definitions and goals. If it's curriculum-related material, the answer is a resounding "Yes!" If it's a case of learning a specific skill, such as typing, the answer again is, "Yes." However, if the user is looking to improve in something a bit less quantitative and more qualitative, such as problem-solving and decision-making, then it is extremely difficult to prove that educational games do any more to sharpen skills than any other type of entertainment program.

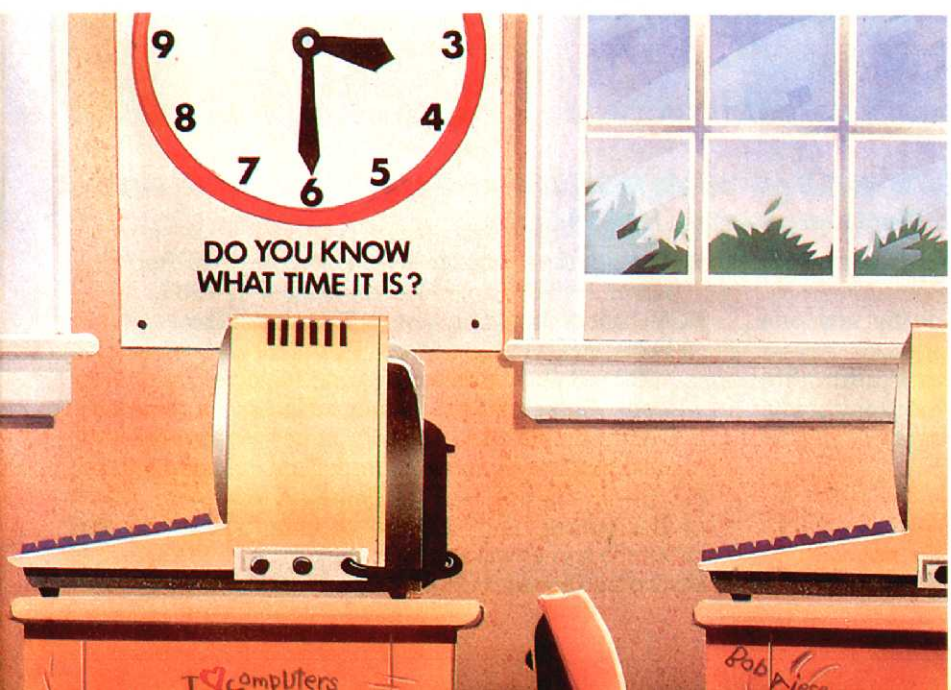
Types of Educational Programs

Educational software falls into three basic categories: drill and practice, turtorial, and simulation.

Any program that requires the memorization of simple items by rote is probably drill and practice. There's nothing inferior about this type of program. As Tom Garsh of AEC says, "If you want to be a good basketball player, you practice. There's nothing wrong with practice."

Tutorials are usually concerned with teaching underlying concepts and generalizations. A good example would be the logic series Eduware is introducing this fall.

A program that puts the user in a situation similar, or related, to one in real life is a simulation. Scarborough's *Run For The Money* is an example of a simulation in a play format.



1984 HALL

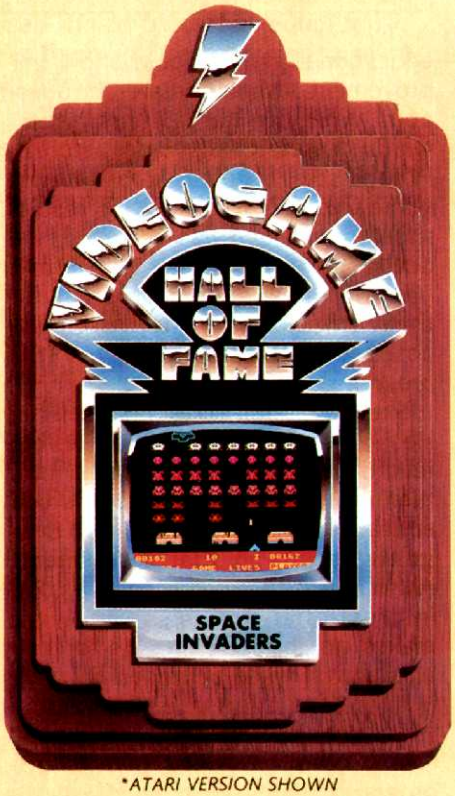
By THE EDITORS OF ELECTRONIC GAMES

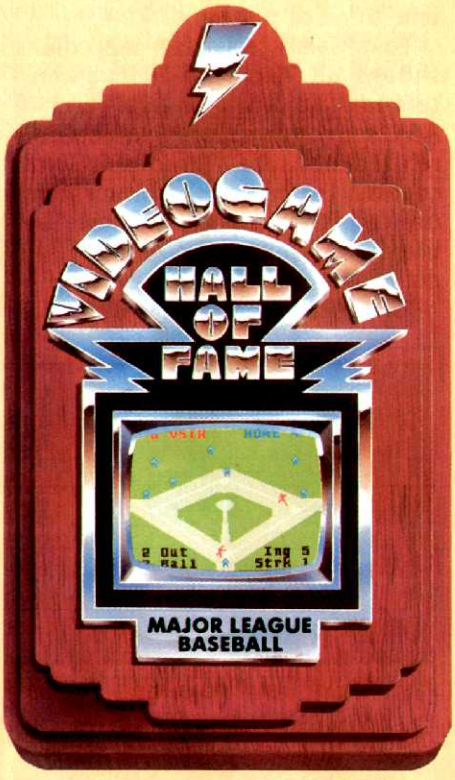
Immortality is waiting for two outstanding videogames, computer games, or coin-ops. Which ones? Ah, but that's the question which the electronic gamers of America must answer by voting in the annual Videogame Hall of Fame election.

Even a forward-looking hobby like electronic gaming shouldn't neglect its own illustrious past. That's why **Electronic Games Magazine** decided, in 1982, to establish a continuing monument to the best videogames ever created — the Videogame Hall of Fame.

Currently within the select circle are **Pong** (Atari), **Space Invaders** (Taito), **Asteroids** (Atari), **Pac-Man** (Namco/Midway), **Quest for the Rings** (Odyssey), **Major**

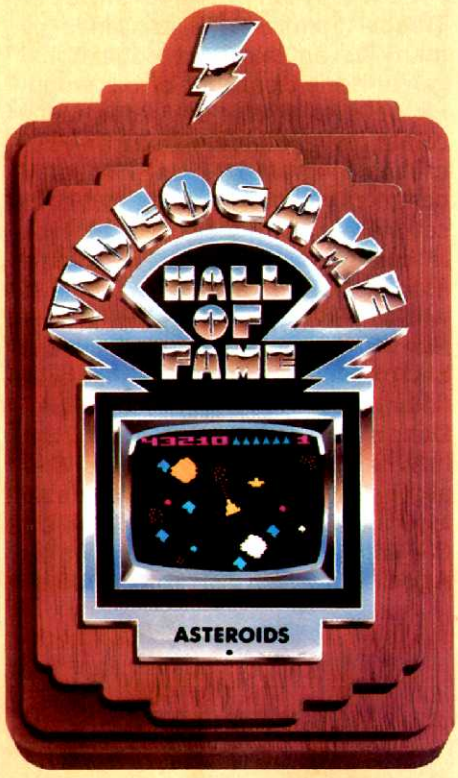
***SPACE INVADERS**
(TAITO)





MAJOR LEAGUE BASEBALL
(MATTEL)

ASTEROIDS
(ATARI)



*ATARI VERSION SHOWN

Rules for Voting for the Electronic Gaming Hall of Fame

1. Any knowledgeable electronic gamer is eligible to vote.
2. Only one nomination shall be made by any one person.
3. Any commercially published programmable videogame cartridge, coin-operated electronic game or microcomputer game software program is eligible for nomination.
4. All nominations must be received on the ballot included in **Electronic Games** magazine. A copy or facsimile is perfectly acceptable, if you do not wish to deface your copy of the magazine.
5. The deadline for nominations for the 1983 Electronic Game Hall of Fame Election is **April 1, 1984.**
6. All ballots should be sent to: **Electronic Games,** Hall of Fame, 460 West 34 Street, 20th Floor, New York NY 10001. Ballots received become the property of **Electronic Games** magazine and none can be returned.

Sounds simple? It is. The two games which receive the highest number of nominations will be inducted into the Electronic Games Hall of Fame. A complete report of the voting, and selected comments from readers about the games will appear in the October, 1984 issue of **Electronic Games.**

OF FAME

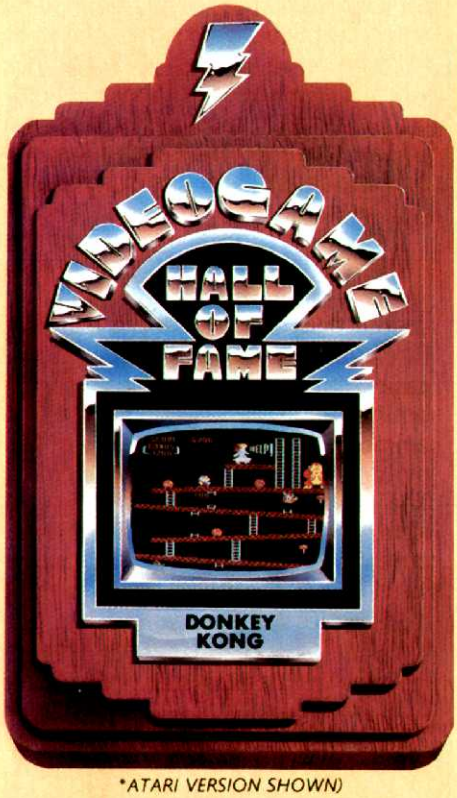
Will Your Favorite Game Get Elected?

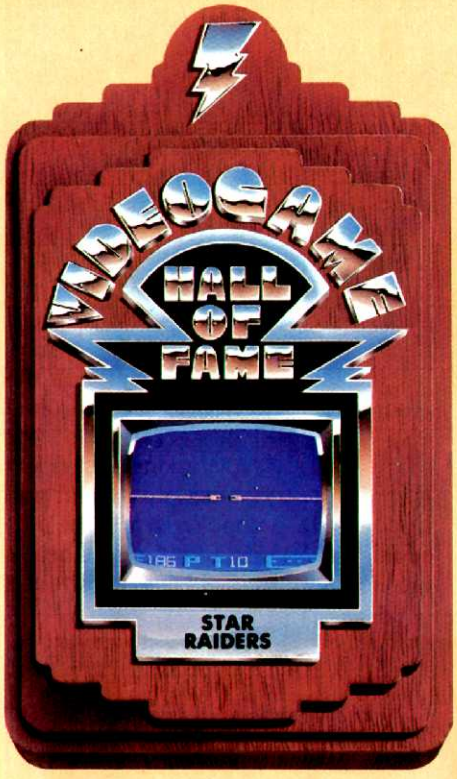
League Baseball (Mattel), **Defender** (Williams), **Star Raiders** (Atari), **Donkey Kong** (Nintendo), and **Zaxxon** (Sega). That number will be increased by two games as a result of this year's election.

All you've got to do to participate is fill out the voting coupon below and mail it to **Electronic Games.** The two videogame cartridges, coin-op machines or microcomputer game programs that corral the greatest number of votes will be installed in the Hall of Fame.

In the most recent voting, some of the titles which barely missed election included **Tempest** (Atari), **Pitfall** (Activision), and **Advanced Dungeons and Dragons** (Mattel). Will this be the year one or more of these contenders makes the grade? Or will other super-games ride to glory on a wave of public support? The answer is up to you: Vote!

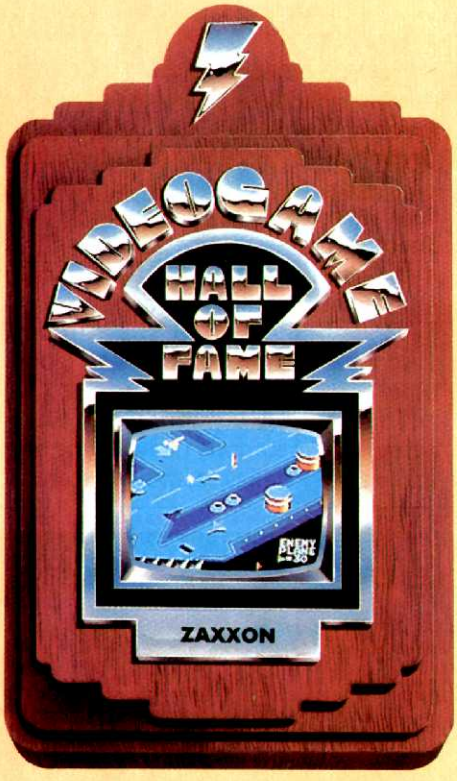
***DONKEY KONG**
(NINTENDO)





STAR RAIDERS
(ATARI)

ZAXXON
(SEGA)



**ATARI VERSION SHOWN)*

I would like to nominate the following programmable videogame, coin-op game or microcomputer software program for inclusion in the Videogame Hall of Fame:

_____

The main reason I feel this game merits such an honor is:_____

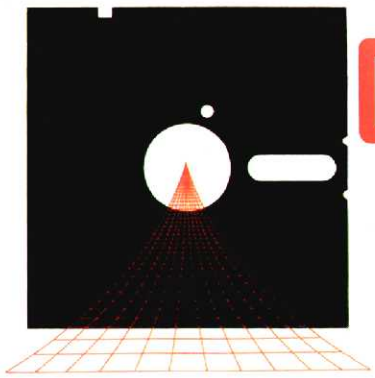
_____

_____

My Name_____

Address_____

Send all ballots, including copies and facsimiles to: Electronic Games, Hall of Fame, 460 W. 34th St., 20th Floor, New York, N.Y. 10001.



COMPUTER GAMING

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SOFTWARE SHOWCASE

LADY TUT

Designed by Greggy
California Pacific/Apple II/48K disk

California Pacific has never produced run-of-the-mill games, and this fast and furious action adventure with overtones of **Ladybug** and **Shamus** is no exception. Exploring the maze-like levels of a sacred pyramid to find the resting place of the legendary Lady Tut, mother of the famous Tutenkhamen is a guaranteed good time.

Conventional weapons won't work against the nefarious Lady Tut or her minions — snakes, serpents, scarabs and animated skulls, so the intricately animated on-screen explorer must step lively to avoid losing one of the three lives with which the player starts the action. Avoiding fatal contact with the nasties is made easier by the unusual construction of the labyrinth corridors. Numerous turnstiles permit the adventurer, but not the creatures, to push the walls around and alter the configuration of the maze during play. Working this trick at the right moment can put a stout wall between the archeologist and the pursuers or even trap a nest of foul beasts in a corner of the field, leaving the rest of the corridors virtually free of danger.

Lady Tut's minions protect the lady's tomb from intruders.

There are two goals to seek at each level. One is to collect the one to three rings tucked into odd corners on each playfield. Each ring adds 250-750 points to the total score and increases the explorer's stock of ammunition by up to 10 bullets. The other goal is to latch onto the key and open the lock which guards the exit to the next highest playfield. In most cases, there's a double lock, and the second key will only appear after the first is fitted into the keyhole.

The bullets come in useful when the explorer unearths the "heater", a projectile weapon that is generally found on the third or fourth level. It makes threading through the mazes much easier, but a quick trigger finger is bound to leave the player out of ammo just when the denizens of the pyramid become most threatening. The heater fires only to the left or right, set off by a press of the appropriate action button, so North-South passageways are especially menacing at all difficulty settings.

Lady Tut has outstanding sound, particularly for an Apple disk. Use of the Mockingboard, though optional, adds additional lustre to the audio accompaniment.

Playability is the outstanding attraction here, though *Lady Tut* is also fun to watch and hear. The joystick response — the game is also playable with keyboard entry — isn't perfect on 90-degree turns to the North or South, but the problem doesn't seriously impede play. Other than that, *Lady Tut* is first class fun all the way.

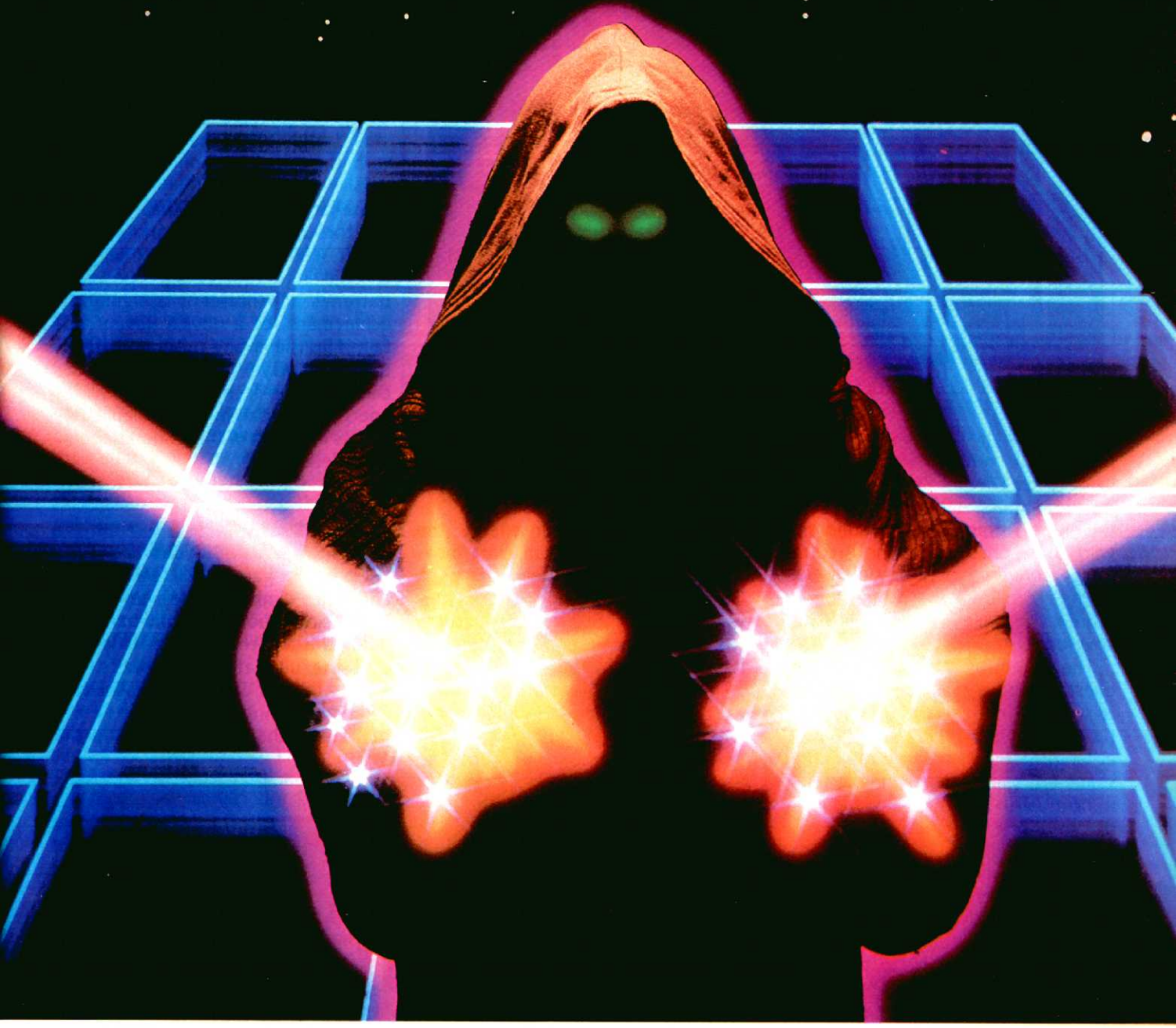
(Steve Davidson)

STELLAR 7

Designed by Damon Slye
Software Entertainment/Apple/48K disk

Things are going mighty well for Gir Draxon, Supreme Overlord of the

SILICON WARRIOR™.
PROGRAMMED TO BLOW YOU AWAY.



The year is 2084, and the Silicon Valley is enveloped in a conflict of the fiercest magnitude. Warriors from the House of Peanut, the House of Apple, the House of Adam, and the House of Pong are competing for a computer program which will unravel the mysteries of the Universe and lead to eventual domination.

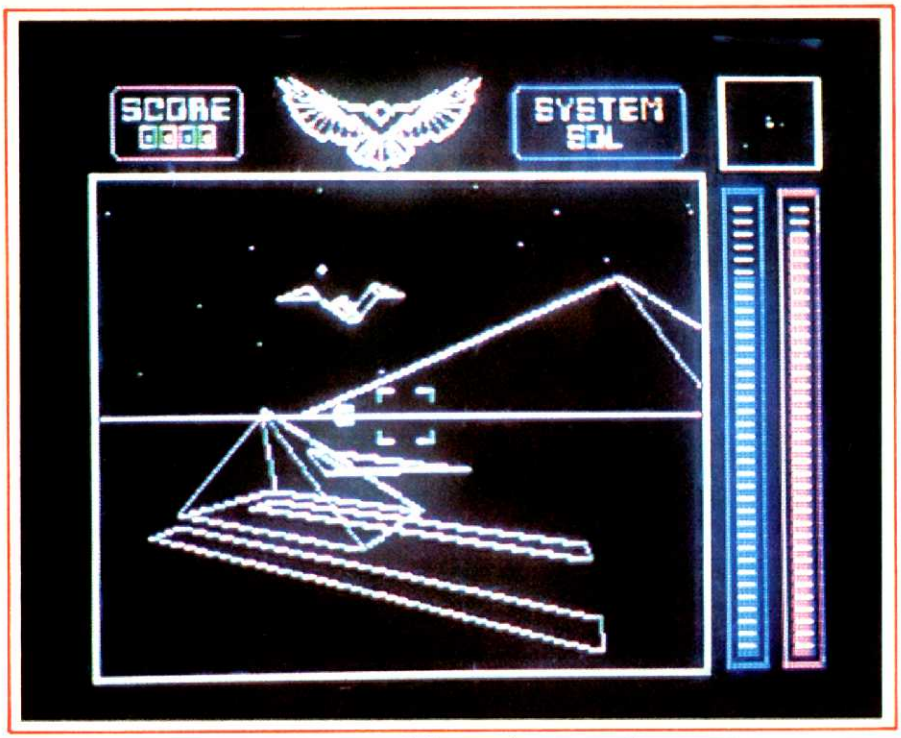
You are one of the Silicon Warriors, your mission is to program five of the chips in a row before any of your opponents can do the same. They will try to beat you to the task and steal the program or destroy you with laser fire. Or, you might even be swallowed up by a black hole "bug" in the program that appears when you least expect it. Using your joystick, you teleport from one chip to another as the battle intensifies through seven levels of play.

With the proper strategy and a dash of speed, you can be Master of the Silicon Valley.

One to four players; joystick controlled.

EPYX™
COMPUTER SOFTWARE

Strategy Games for the Action-Game Player



Earth's supertank, the Raven, challenges the Arcturan fleet in *Stellar 7*

Arcturan Empire in this solitaire first-person tank combat game. According to designer Damon Slye, who makes his professional debut with this disk, the entire Terran Fleet is headed on a wild goose chase while the Arcutran forces converge on our defenseless planet by utilizing the warp link gate which the stardwellers have discovered.

The seven warplinks of the game constitute an express line from Arcturus to Earth that can shorten the usual traveling time to a fraction of its former length. There's no way the Earth's space-going armada is going to make it home in time to help with the defense.

Humankind's last hope is a super armored fighting vehicle dubbed the Raven. The player must command this tank of tomorrow in a series of battles that, if successful, can push the Arcturan invaders right back to their own backyard.

The main section of the video display corresponds to the Raven's front viewscreen. To the right of this are two verticle bars that indicate the amount of power and the shield strength remaining. Every hit scored against the Raven reduces the shield reserve which, once exhausted, leaves the vehicle utterly at the mercy of the Arcturan arsenal. A graphic symbol above the viewport shows the status of the invisicloak device, which the arcader activates by pressing the "return" key. For a cost in energy, the cloak gives the Raven an extra measure of protection for a few seconds. A radar scope in the upper right corner shows the positions of enemy forces and the inanimate obstacles that dot the landscape.

The Arcturans have quite a varied assortment of ground and airborne fighting machines. The player can get an excellent briefing from the disk prior to the start of actual play. One impressive aspect of this video guide is that the enemy vehicles and aircraft, depicted in a fine-line style reminiscent of **Asteroids** and the early work of Nasir (**Zenith**) Gebelli, rotate to give the computerist a look from every possible angle. It is possible to skip the briefing, if desired, once you really know the ropes.

Joystick control allows the player to move the Raven around quickly and easily. It is possible to go forward, reverse, angle off to the left or right or turn the turret without moving the vehicle.

Stellar 7 isn't a game that many will zip through without working up a sweat. Just surviving the first warplink to challenge the enemy's powerful batteries at Antares is a significant achievment for a novice Raven captain. This is a strong program that requires the player to plan attack tactics carefully or risk burning up precious energy just roaming the alien landscapes in search of the sometimes elusive foe.

(Arnie Katz)

MOUNTAIN KING

CBS Software/Atari/16K cartridge

Computer gamers will feel like Indiana Jones himself as they delve deep into the cavernous diamond mine that hides the ancient Temple. It is here that the ultimate prize awaits. But finding the lost Crown of the Ancients — and returning with it to the Perpetual Flame that burns high atop the

Exploring the interior of a subterranean chamber in *Mountain King*

mountain — is no easy feat, even at the easiest level of play.

The player begins each game at the surface of the gargantuan mountain. The Temple is hidden deep in the mine, but the wraithlike Skull Spirit bars the way to any but true believers, letting players pass only after they award it with the elusive Flame Spirit.

The gamer begins by collecting as many diamond points as possible. This is accomplished by running over the shimmering dots that line the corridors on every level, and also by finding and opening hidden treasure chests, which are only visible in the beam of the gamer's flashlight. (The chests contain either diamonds or bats, the latter always return later to dog the archaeologist's steps.) Each time 1,000 diamond points are collected, a tiny dancing flame appears at the lower left-hand corner of the screen. This means that the Flame Spirit is present somewhere in the mountain. Like the chests, it can only be seen when the flashlight is turned on it.

Luckily, players need not rely on their eyes alone for a clue as to the Flame Spirit's whereabouts. A faint theme can be heard when the gamer gets close, and the closer he or she is, the louder the theme. In addition, the Flame Spirit flickers briefly every so often, giving a fleeting clue. To capture the flame, players must position the explorer directly over it, then kneel down to pick it up.

Successfully capturing the Flame Spirit allows gamers to enter the sacred Temple — after they've presented the prize, on their knees, to the Skull Spirit guarding the entrance. Only then will be make himself visible, allowing access to the inner room — and the Crown. After properly putting the crown on the explorer's head, the next goal is to bring the relic to the Perpetual Flame that burns at the top of the mountain before time runs out or a bat steals back the Crown. (If the latter happens, players have to find another Flame Spirit to retrieve the prize.) A short theme plays accompaniment, and the faster it plays, the less time remains.

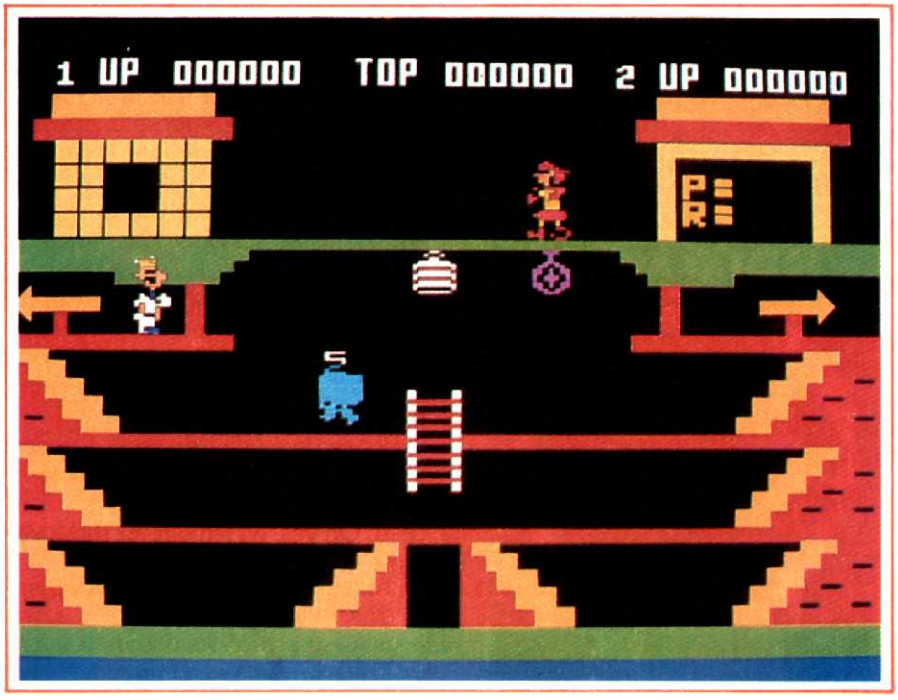
Eight minutes are allowed to complete the entire Quest. While *Mountain King* is a nonviolent game, there are two possible ways to kill the explorer: If he touches any of the small fires guarding the Temple (or marking the spot where a Flame Spirit danced), or if he's caught at the bottom of the mountain by a hungry spider. These creatures dash out from the left side of the screen and spin a hasty web around the hero. Jiggling the joystick breaks him loose, but if he's not fast enough, he ends up a warm meal.

All in all, *Mountain King* is one of the most playable climbing games seen in this or any previous year. *(Tracie Forman)*

POPEYE

Parker Brothers/Atari/cartridge

Well, blow me down! It's **Popeye** the Sailor doing what he does best —



The Sailor Man prepars to retrieve Olive's kisses in *Popeye*

Zaxxon is a trademark of Sega Enterprises, Inc.

chasing after Olive Oyl's favors and getting revenge on Brutus (whatever was wrong with "Bluto"?).

This Atari version of *Popeye* is perhaps the best translation of the popular coin-op to be found on any system. The music and graphics are up to the Atari's capabilities. And with the three screens, there's more than enough to keep occupied for awhile.

As with most climbing games, there are stairs, ladders, sliding beams, and teetertotters aplenty. However, *Popeye* is more than just a climbing game; it's also a punching game. Throughout all three screens, the player has to swat things in order to avoid losing a man. The most numerous are the bottles thrown by the Sea Hag. When they come one at a time, they are easily dispatched. Even four bottles in a row can be handled with some practice. But occasionally, she throws two from opposite directions. It's at times like this that Popeye has to show his true mettle.

Aside from the bottles, Popeye's biggest worry is Brutus. Any contact with him loses a life; prudence, therefore, says avoidance is the best policy. However, it's not enough to simply be

on a different ledge because Brutus is capable of jumping up or reaching down and grabbing Popeye by the cuff. Luckily, our sailor has two weapons at his disposal. The first is a barrel hanging in the middle of the first screen. If Popeye knocks it down at the right moment, it falls on top of Brutus and holds him for a while. Popeye can also eat a can of spinach and then attack Brutus. This, however, should be used as a last resort because it causes everything on the screen but Popeye and Brutus to freeze, so Popeye can use it to give him some time to prevent a heart from hitting the water and being lost.

Popeye is a definite winner and goes to prove that some programs can be tied to another media and still succeed. Oh yes, watch out for those vultures — they mean business.

(Vincent Puglia)

GRIDDER

Microdigital/VIC-20/cassette

Here's a grid-color game with a few strategic twists. The basic idea is the same as in so many other "fill in the grid" contests: Move the on-screen character — in this case, grimacing face — around the edges of each square in the grid, thus causing it to change color while adding points to the score. But on **Gridder's** playfield, some sizeable areas of the screen are already grids of a different color. There is some method to this madness.

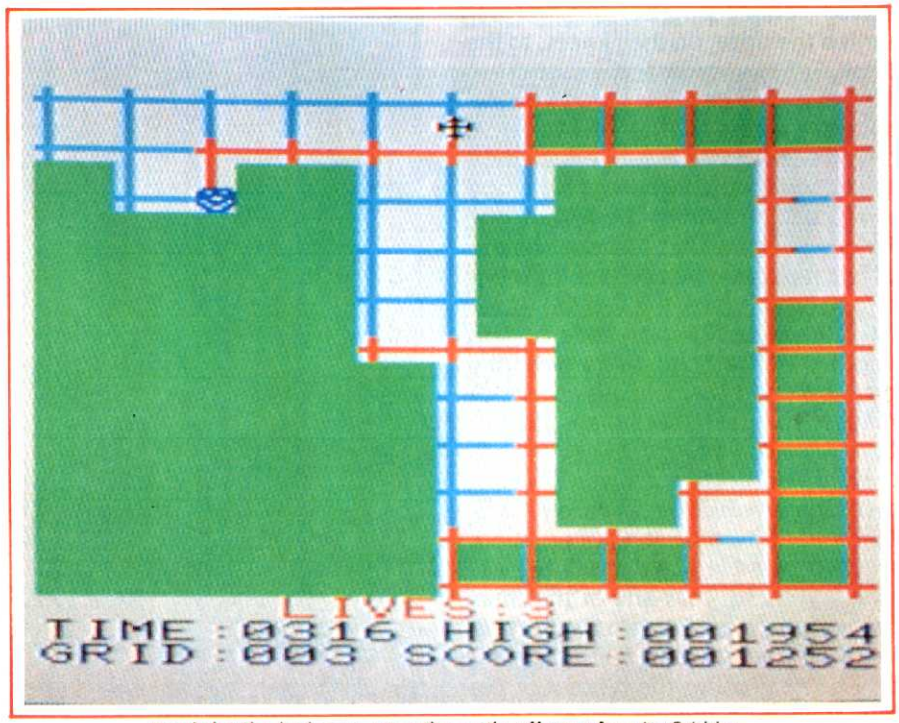
The chasers who pursue the face of the grid — one in earlier screens, more later — can only catch sight of you when you're on the same line they are. This doesn't mean you have to be running along the same line — crossing a line they're crossing at the same moment also reveals your presence. And since the lines disappear in all the colored areas that are colored in at the start, they serve to hide you quite nicely.

Using the solid areas as shields and some artful dodging mixed with quick decoy work makes this game go. Pressing the fire button produces a hole in your wake. However, when a chaser is right on your tail, that little trick won't work.

Gamers start with three lives on each grid — there are 256, if you have a few minutes to spare — surplus lives carry over to the next screen, up to a maximum of nine. Each grid has a time limit, and time remaining on the clock when the paint job is finished gets added to the score.

Approach this game the same way you do any grid game, and you may be disappointed. But players who give it a little thought and develop a strategy, will be pleasantly surprised to find there's more to it than may first appear to be the case.

(Charline Komar)



Don't let the bad guys wipe the smile off your face in *Gridder.*

Defcon 5 and counting in Thorne/EMI's *Computer Wars*

COMPUTER WARS

Thorn EMI/VIC-20/cartridge

Computer Wars is loosely based on the movie "War Games" and its scenario is that thermo-nuclear war is imminent. The enemy has launched nuclear missiles headed for the United States — or so it would seem. Actually, the missiles aren't from the U.S.S.R., but only a simulation which someone activated using their home computer! The problem is that the computer at NORAD (the North American Air Defense System) can't tell the difference between an actual attack and a simulation. If these bogus missiles aren't stopped, the NORAD computer will launch our missiles as a defensive action, and we actually will be at war!

The game's video display shows a map of the United States, complete with missile silos. White blips on the map show the position of approaching enemy missiles. The gamer uses the joystick to position the cursor over a blip nearing the silos. Hitting the fire button summons a close-up look at that part of the country. Directional arrows on this close-up view aid the gamer in homing in on the enemy missile, and by tracking it into your sights it can be obliterated using the fire button. Successful destruction of an enemy missile changes the screen back to the U.S. map, and the player earns a try at the "big board" that holds the code to stop NORAD. The objective here is to match the pattern between the smaller board and the "big board" while racing against the clock. Whether successful or not, the same reverts back to the map screen and the gamer must once again track and destroy the remaining missiles. If and when you clear the map of all enemy missiles, the world thanks you with a bonus and it's time for round two, which repeats the above scenario but with a faster count-down clock. The score to beat is 10,000 points, which is virtually impossible.

Computer Wars has mediocre graphics, poor sound effects and only fair play-action. It's a depressing game, with hard to comprehend rules and almost no chance of winning. In the documentation supplied with the cartridge, gamers are advised, "If global thermo-nuclear war is a game, the only winning move is not to play."

This advice seems not only prudent in light of our current political situation, but serves also as a cogent critical insight into *Computer Wars* itself.

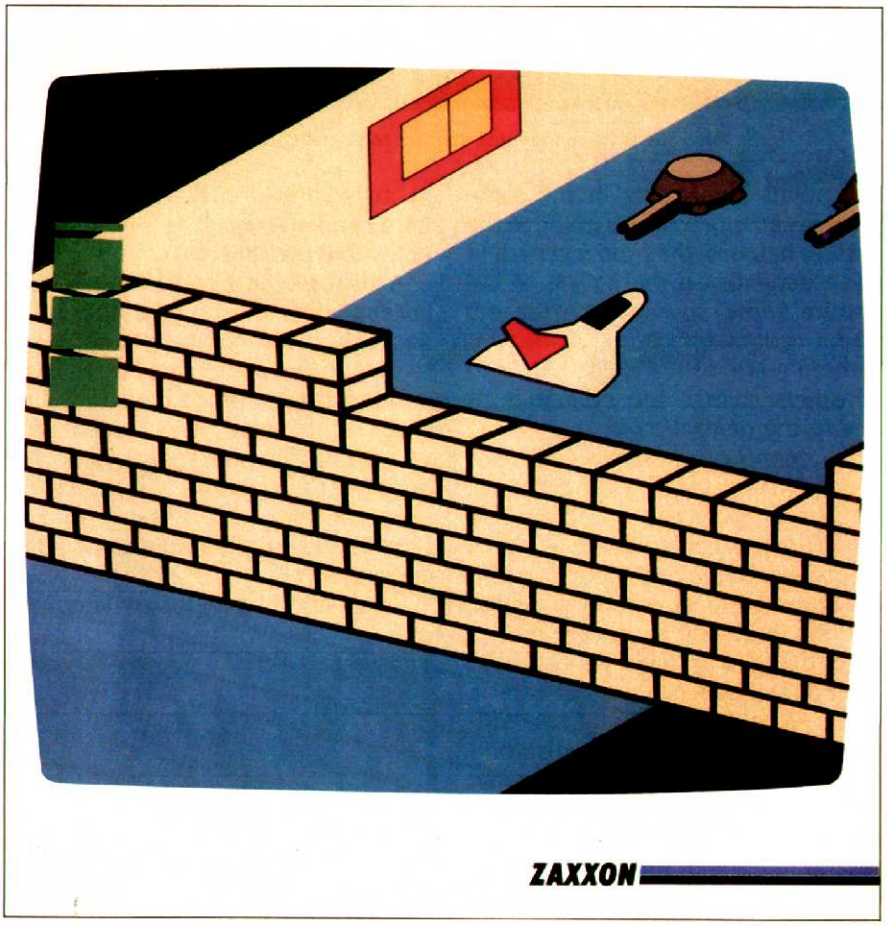
In other words: this is one game where the winning move *is* not to play!

(Tom Benford)

POGO JOE

Designed by W.F. Denman Jr.
Screenplay/Commodore 64/Disk

This 64-screen color-changing game, perhaps the best yet created for the C-64 (as opposed to games im-



ported from other systems), chronicles the exploits of the pogo-stick virtuoso **Pogo Joe** and his attempts to leap from cylinder to cylinder to turn all the tops the same color.

The player can jump the beautifully-drawn character in any diagonal direction, and each landing alters the color of the cylinder to the desired hue. A variety of toylike friends and enemies appears on the playfield in the form of brightly colored eggs. Pogo Joe can earn points by landing in the same square as an egg to crush it. Once the creature hatches, the proper course of action depends on the nature of the creature. Some run away from Joe and can be caught for points, some cost the hero a life if they touch him, and still others change the cylinder tops back to the neutral color.

The cunningly-designed playfields include two special kinds of cylinders. Green tops cause every creature and egg on the playfield to disappear, with the player accruing 250 points each. Black tops are a rapid transit system that lets Pogo Joe shuttle from one end of the field to the other instantly.

Although *Pogo Joe* doesn't offer a bold new play-mechanic, the elements it utilizes are combined so brilliantly that it's a pure pleasure to play. For instance, it's impossible for Joe to pogo off a cylinder into empty space, thus costing one of the gamer's three precious men. The character makes all legal moves and otherwise just bobs up and down in place.

Pogo Joe **is more than just another color-changing game.**

The graphics and audio are sensational. Steven J. Baumrucker's score, which provides a different tune for each playfield, puts him among the masters of gaming sound. Similarly, the inventiveness in the layout of the individual playfields is laudable. Throw in an easily identifiable on-screen hero, and the result is a thoroughly enjoyable package.

Although Screenplay obviously lavished lots of thought about the packaging, the company's approach to instructions leaves something to be desired. It's foolish to have only two small-sized pages of documentation for a game that offers players so many options. Only games which have a series of rules screens can afford to provide this small amount of paper to consumers.

Don't let this minor flaw keep you from getting in on the hopping hijinks, though. *Pogo Joe* is a first-rate job with plenty of re-play potential.

(Arnie Kalz)

CAPTAIN COSMO

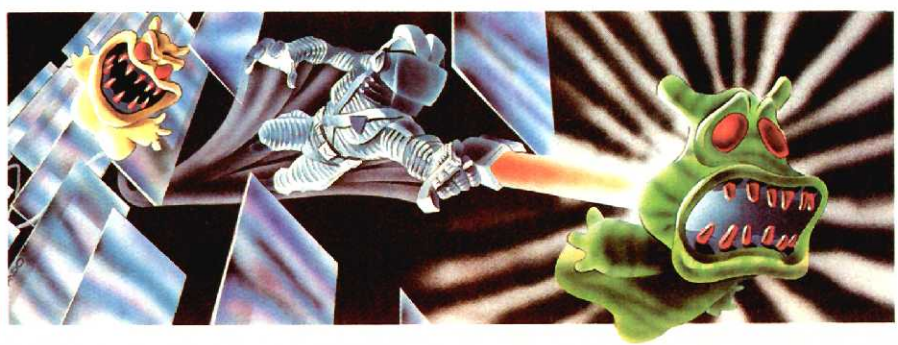
Designed by Greg Omi
Nexa/Atari/32K disk

This duo-directional scroller is definitely off the beaten track. Though it offers the expected fast-paced action, it's dressed up in an unusually charming — and decidedly less violent — form. **Captain Cosmo** deals with the efforts of a cartoonish super hero to capture a horde of escaped animals, the Munchies, and return them one by one to the zoo.

Captain Cosmo has the power of flight to help him get around the multi-screen playfield, but his main weapon is a tranquilizing gun called the somanizer. Munchies turn green and docile for a period after getting zapped by a bolt from this gun. In its normal yellow state, a Munchie can kill Captain Cosmo, costing the home arcader one of the four lives, by touching the costumed champion.

Obstacles mount as the player progresses through the game's 99 skill levels. All are selectable at the beginning of the contest, but the Munchies are enough to keep any novice busy. Moving up to the levels which include Spacey Stacy (a flying saucer that removes Munchies from the zoo) and/or Devious Dan (who can release Munchies and turn somanized ones ferocious prematurely) dramatically increases the difficulty.

Captain Cosmo should be of particular interest to those parents who want to minimize their kids' exposure to violence without keeping them from enjoying the fun of electronic gaming. This program is quite entertaining and exciting, yet doesn't emphasize blowing things up. While the game is a little easier than most other scrolling shoot-outs, it's not so simple that a good player can blow it apart in 10 minutes. *(Arnie Katz)*

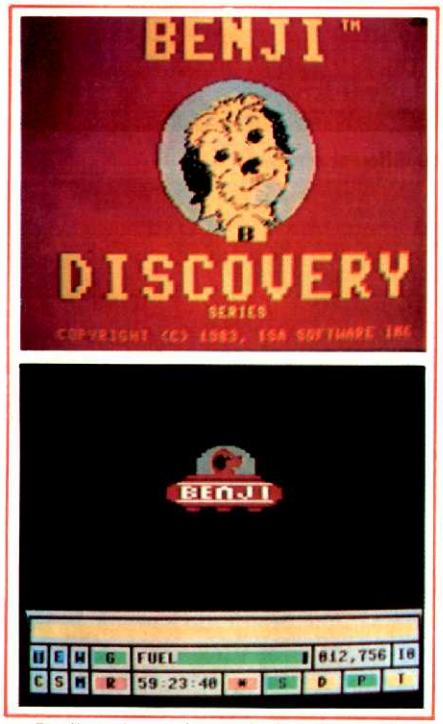


GAME-A-THON

BENJI'S SPACE RESCUE

HES/Commodore 64/disk

Benji, that lovable movie mutt, is now a space cadet with his very own video game for the Commodore 64. **Benji's Space Rescue** takes you and Benji aboard the spaceship Star Woof and together you must save the universe from an imminent alien invasion by rescuing kidnapped scientists held captive somewhere in the solar system. Players can use either keyboard or joystick with equal results. There are seven play levels in all.



Benji navigates his craft though space.

The music and animation are truly first-rate, definitely one of the best audio/visual displays for the C-64 yet, but the game is lacking in many areas. *Benji's Space Rescue* was definitely designed for younger children, what with the Benji motif and all, but the rules of play are quite complex, even for an adult. Such factors as fuel supply, weaponry, fuel and speed have to be planned out to successfully complete the rescue mission, and enemy robot drones must be destroyed as well as other space creatures. The game is of considerable educational value, though, in that it gives a wealth of information about the planets, as well as excellent graphic representations in the "map" mode.

Because of its complexity, this game can be frustrating. The manual is ambiguous in certain respects, especially when explaining how to get the scientists aboard Benji's ship. Play action is mediocre, as most of the game is involved in planning the journey. It has its educational and entertaining points, particularly the theme music, but all in all? Eh.

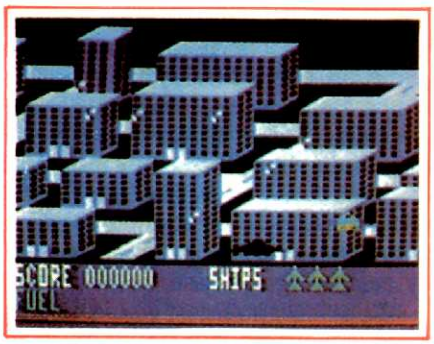
Considering the prodigious intelligence of the game's star, it might not have been a bad idea to have gotten *his* input.

(Tom Benford)

NIGHTRAIDERS

Datamost/Atari/48K disk

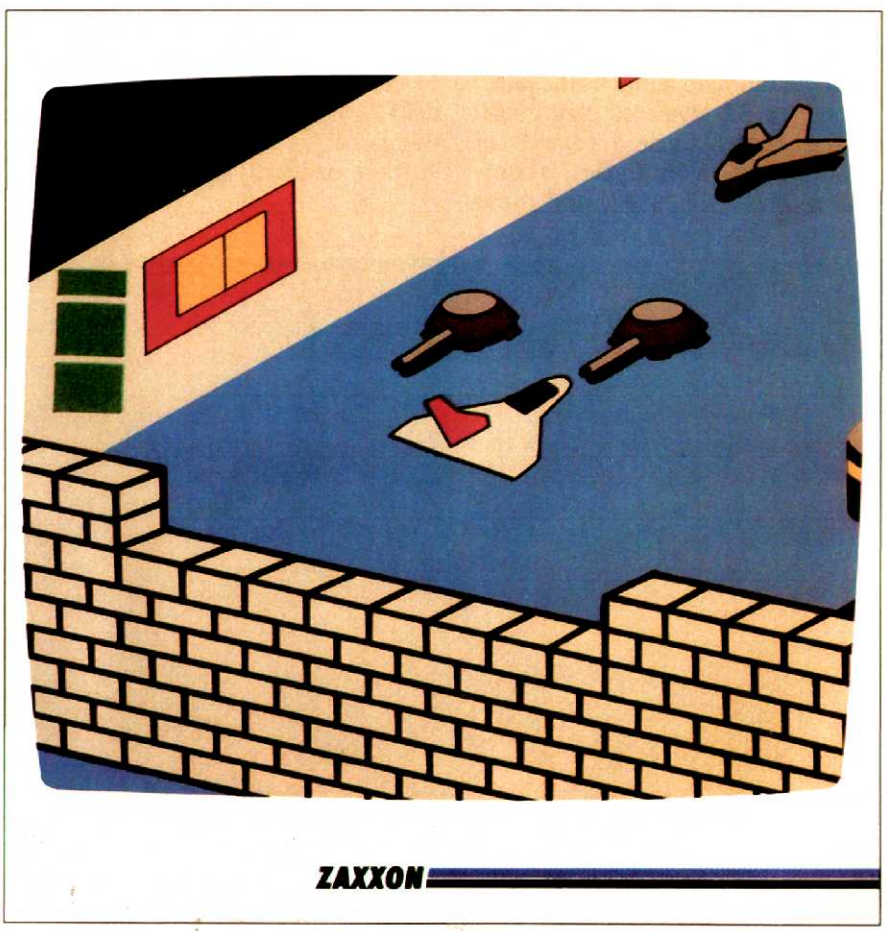
Nightraiders is a poor man's **Zaxxon**. As in the classic, the object is to get through the preliminary screens in order to destroy the enemy base. Anything and everything that moves is a target, and points are determined by the type of enemy destroyed and the level being played on. Also like *Zaxxon*, fuel is replenished by destroying fuel depots. Unfortunately, this is where the similarity between the two programs ends.



The first of several *Nigthraiders* screens.

Although the graphics in *Nightraiders* are slightly above normal — especially those of the city and the tanks within it — they're not what gamers have come to expect in bombing run games. True, the screens scroll down from the top, but there is no sense of perspective. In the game, the player doesn't have to worry about clearing an obstacle such as a building or a wall. Instead, his only concern is blasting everything in sight.

Perhaps the worst aspect of *Nightraiders* is the documentation. The



ZAXXON

gamer has no idea what any of the targets look like before playing the game. In some cases, this is only a minor annoyance — trains, after all, are trains — but, this reviewer is still not certain what the enemy base and the fuel depots look like. Nor is the documentation clear about how many points (besides the bonus) are gained by destroying the base.

All in all, *Nightraiders* would make a good videogame, but leaves much to be desired as a computer game.

(Vincent Puglia)

DEADLY SKIES

Tronix/VIC-20/cartridge

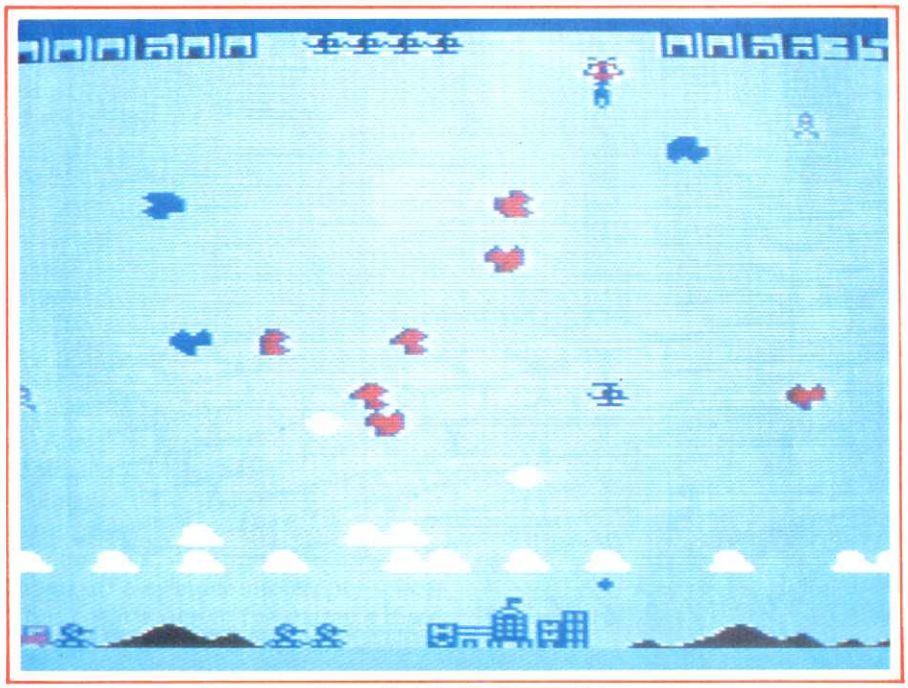
Deadly Skies places the gamer right in the middle of a war zone commanding a squad of five helicopter gunships. The mission is to blast away both the cloud cover, under which the enemy is lurking and preparing its counterattack, and the enemy emplacements. Ground targets include a military base, multiple missile silos and scores of tanks—all shooting back at the chopper. As if that weren't enough to contend with, there's also a UFO soaring above dropping bombs, radioactive asteroid clouds crowding the sky, and the small-but-deadly smart bombs which seek out the gamer's chopper across the skies trying to destroy it before it does likewise. It is indead the ultimate aerial traffic jam.

There are 32 levels of play in all, with two cycles: Cycle 1 consists of levels one through 16; Cycle 2 is composed of levels 17 to 32, and these levels are twice as fast as those in the first cycle. A bonus gunship is awarded at each 10,000-point increment. A joystick controls both chopper flight and bombs, firing. Sound quality is fair, graphics and animation good, and the play-action is very good.

Deadly Skies is action-packed and will appeal to those gamers who love to shoot everything in sight on a playfield—indeed, you must to survive in this game, for everything is the enemy in these deadly skies!

(Tom Benford)

One of *Loderunner's* 150 different screens.



Danger lurks in the *Deadly Skies*.

LODE RUNNER

Broderbund/Atari, Commodore computers/48K disk

The 1984 Arcade Award winner as Computer Game of the Year isn't just for Apple owners anymore. Broderbund has translated this 150-screen climbing and digging contest virtually untouched to both new formats. The Atari and Commodore editions feature the same high-res animation, addictive play mechanic, and design-your own board option that made the original game so popular.

The only major difference is the one-button joystick used by both Commodore 64 and Atari computers. While the Apple's two-button joystick allows gamers to dig holes to either the left or right, in both new translations players can dig only in the direction they're facing—or, if they choose the second option, they can dig behind them instead.

The object of the game is to collect all the barrels on each level. Armed only with a digging shovel, the player must trap pursuing guards in pits while digging tunnels, scaling ladders, and shimmying across ropes in pursuit of the motherlode. One of the nicest features of **Lode Runner** is that gamers can fall vast distances without so much as a bruise.

Both translations prove that, whether played with one joystick button or two, *Lode Runner* deserves its ranking as the computer game of the year.

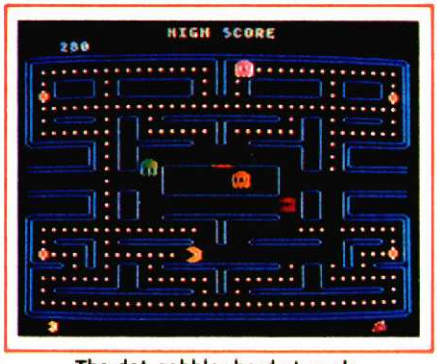
PAC-MAN

Atarisoft/Commodore 64/cartridge

What else can be said about the biggest electronic game hit of all time — except that it's available on cartridge for the Commodore 64?

One or two players control the dot-gobbler as he munches his way through the maze. Play can be started on any level (fruits indicate the difficulty of the screen, with cherries being the easiest level) and continues to get harder from that point.

As always, players will soon begin working out patterns — *Pac-Man*, after all, is the game that birthed the concept of pattern play. So now Commodore-64 users will have the dubious distinction of being able to work out charts and dust off the stop watches in order to determine just how long those ghosties stay blue. Ah, the joys of *Pac-Man!*



The dot-gobbler hard at work.

Pac-Man has adapted well to the Commodore 64. The maze, ghosts, and bonus objects are all well-rendered, with no flickering in sight. In fact, the only thing missing is the bonus screens. But even without them, *Pac-Man* will be a plus to any Commodore 64 library.

(Tracie Forman)

MS. PAC MAN

Atari/Atari computers

Many of Atari's recent arcade-to-home translations capture the "feel" of the coin-ops, even though it means sacrificing some of the graphics. What the games lack in visual splendor, they make up for with arcade-like play-action, the real root of any game.

While the cartridge has three intermission screens and looks remarkably like the arcade **Ms. Pac Man** (except that the mase is adapted to the short, wide TV screen), it doesn't feel the same. In fact, no matter which joystick is used with the game, *Ms. Pac Man* sometimes seemed to have a mind of

her own — like during hairpin turns and stop-on-a-dime directional changes. Frustrating? You bet!

Another, more minor, annoyance is the lack of a joystick button-controlled game reset. Since so many games can be lost due to the lady gobbler's poor control response, surely Atari could have made it more convenient to try again!

Still, Pac-fans will probably find enough play value here to maek *Ms. Pac Man* worth their while. . .as long as they keep the slightly stilted control scheme in mind.

(Tracie Forman)

PIPES

Creative Software/VIC-20/cartridge

The object in **Pipes** is to construct a pipeline from the main water supply tank to every house in the area, using as little money as possible. The amount of money received is determined by the number of houses you, as the plumber, connect. (One house brings $2,500.) Pipe costs vary depending on the shape, and you are limited to the amount of each shape available, so plan your strategy well.

The same operates on the standard VIC-20 memory, and requires a joystick. The "V" key on the keyboard is also used to turn on the water valve when the plumber completes the connections.

To begin play, position Arlo the plumber next to the Pipe Factory window and choose which type of pipe is needed. By pressing the fire button, Arlo grasps the pipe and can move about the playfield. The action continues in like fashion until the pipeline is complete with all houses connected. Then, turn on the water valve, cross your fingers, and hope there are no leaks. If there *are* leaks, you must reposition the pipes and turn on the water valve once again. If all the connections are watertight, the water runs through the pipes and the game is over!

The graphics are fair, with objects on the screen often obscured or removed from view as Arlo wanders across the playfield. The sounds are unique, however, especially the one Arlo makes when he releases the pipe — an "oops,dropped it" effect.

(Tom Benford)

ARTICLES OF WAR

PARTHIAN KINGS

Avalon Hill/Apple II/48K disk

The crystal blue waters of the lake shimmered as my Rangers set up camp by its shores. In the distance we could hear the shouts of a battle, the clash of armor, the counterpoint clashings of sword against sword and spear on shield.

The capital lay nearly three years behind us now — years of strife and travel. Now, wearied but unbroken, we had carried the war to the very heartland of the enemy's nation. We would occupy his towns, possess the sacred waters of his lakes, and sooner or later the head of the enemy King would be placed at my feet — and when this happened, I did not expect his body to be then attached. I turned to my faithful wizard. There was a forest to be magically cleared, the first step in a battle to end a war. . . .

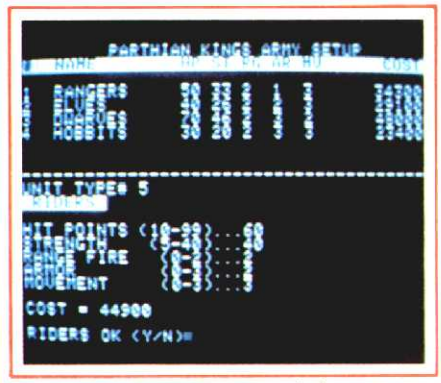
Parthian Kings from Avalon Hill is very close to being a classic game. It allows the player to do everything from designing his fighting units and playing area to working out the best strategy to use with what he's designed. One to four human Kings can govern and general their segments of this world — or the computer can play one to three of the Kings against human players.

The first thing the new King must do when he first boots this disk is to choose the "Make Army" function. At this point, five styles of units may be designed. Each unit type is given a number of hit points. The computer then presents the player with a range of possible strength points for a unit with that hit point level. Once the strength is chosen, the range of the unit's weapons, its armor rating and movement points available per turn are all likewise chosen from a computer-presented and calculated range of possibilities. The last thing calculated is the cost of the unit, but more on that in a moment.

It doesn't matter if you design a hobbit infantry or a barbarian horde, the method is the same. And, once an army list of units has been so designed, it can be stored on disk for later use. In this way, each player may have an entirely different form of army from the other Kings in the game.

So, what stops one King from designing nothing but super-units of top hit-point level capable of eating their way through every form of inferior troop? Simple economics. The more capable a unit, the more difficult it is to raise.

Make a new army or map or begin battle.



Computer assists new army's formation.

Each capital and occupied town has a population which may be taxed. The taxes are used to buy new armies. If your entire force is composed of elite units, it will be a tiny force indeed, and not capable of the strategic maneuvers needed to achieve a victory.

Once the army has been designed, the player(s) may then design a gameboard or map to play upon. The computer will generate random terrain of clear, rough, forest, lake and mountain spaces, or each space on the board may be individually assigned its terrain characteristic. (As in most such games, the "worst" or roughest terrain costs more in movement points to enter but adds defensive bonuses during combat.) But there's also a ready-made map of Parthia stored on disk that players can use right away.

The game begins with a status report of each owned town (your capital is the only town owned at the start of the game). This tells you how many people live there to be taxed, how many have been born or died, how many have moved in or out, the amount the population pays in taxes, and the town's defensive strength.

The King (you) then purchases units for a town by spending that town's tax revenues on the units available (which were themselves designed previously).

After units are purchased, there is a short and optional Magic Phase. In this phase your wizard may (according to his experience) cast spells to raise or lower terrain values in a space, add to or subtract combat forces from a town, increase division strengths and even change unit types.

Following the Magic Phase is the Position Units phase. You can quickly position any town unit on any space outside the town. These units must be all of the same type. You can also assign units of varying types to "convoys" in order to move them together (although they cannot initiate combat in this intermixed format).

The Range Weapon phase allows for units with a ranged capability to fire at enemy units. This is done by using the cursor to move a crosshair atop the target — spacebar lets the firefight (or arrowfight) begin.

The Strategy Phase is when you plan all of your units' movements for the coming yearly game turn. Each unit blinks on-screen in high-resolution silhouette in turn. As a unit flashes, the King uses the 1-6 keys to select the direction which the unit will move in. Movement is, of course, governed by terrain costs.

When all Kings have gone through the above process, the computer displays each unit's movement in a sort of video movie. As units try to enter the same space, they go into a combat mode. In this combat mode, the computer shows the attacker's and the defender's effective hit value as well as the terrain levels and finally calculates the outcome of the battle. If there is a winner, that unit gets the contested space.

Victory points are awarded at the end of each Movement and Combat Resolution phase. For killing an enemy King (yes, each player is represented on the board) 25 points are awarded; for doing away with a convoy, 5 points; for offing an enemy wizard, 10 points; and for occupying a space con-

taining a lake, 1 point for each.

The manual suggests that five game turns is a good length — although with a "long" game you simply play until all the Kings are totally defeated but for the victor. We found the five game turn suggestion to be the most feasible.

While it's possible to play a solitaire game against three computer-run opponents, it would call for much patience. The computer does move rather slowly — no slower than a careful human might move, but waiting through three computer turns means raiding the refrigerator, having a coke, reading a story or telephoning a friend, depending on your own proclivities. But just using one computer opponent and going head-to-CPU against it was a fun and rewarding gaming experience. Even using two computer opponents is quite enjoyable.

Play proceeds quickly with the various onscreen prompts showing gamers such things as which key moves the unit in which direction, so that it's difficult to make a keyboard blunder. While the overall strategy can be moderately complex, the actual tactics are a breeze to master.

If there were a way to save a game in progress, this would be a far better program. As it is now, one must play a game from beginning to end — no leaving for bedtime, to visit non video-equipped friends, or whatever. So make certain you have a good block of time set aside when you play.

The only thing really standing between this game and an overall rating of "classic" lies in the fact that there is no background scenario included in the manual. Many of the game's rules (for instance, one victory point for occupying a lake space) cry out — at least to this player — for some sort of explanation. And, while designing your own forces is a fine feature, it would certainly make some sort of sense to have an overall framework in which to structure your armies.

All of this relates to what fantasy-author J.R.R. Tolkien once called an author's "subcreation." A fantasy world, to seem believable, must have internally consistent laws and must be as complex and as many-layered as as our own reality. Without these qualities it is very difficult for the reader to suspend disbelief and enter into this alternate world.

The very best fantasy games provide both a "subcreation" and a challenging gaming framework to explore that subcreation within. While the game of *Parthian Kings* is certainly a top-notch computer game, I would like very much to see it utilize a more acceptable "subcreation."

But, that quibble aside, *Parthian Kings* does provide an exciting and very unique gaming system. The ability to design one's own armies and store unit types on disk make this game an absolute natural for computer clubs to investigate for tournaments. For multiple-player capabilities, this is just about the best.

(Neil Shapiro)

PASSPORT TO ADVENTURE

INFIDEL

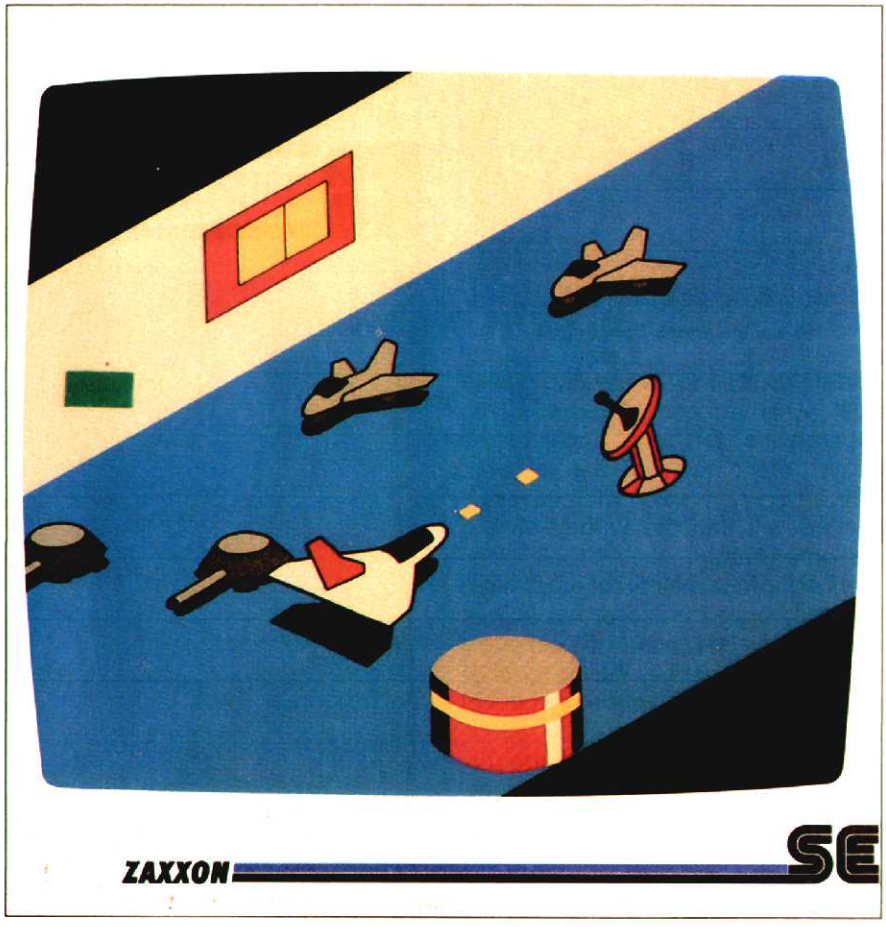
Infocom/Most computers/48K disk

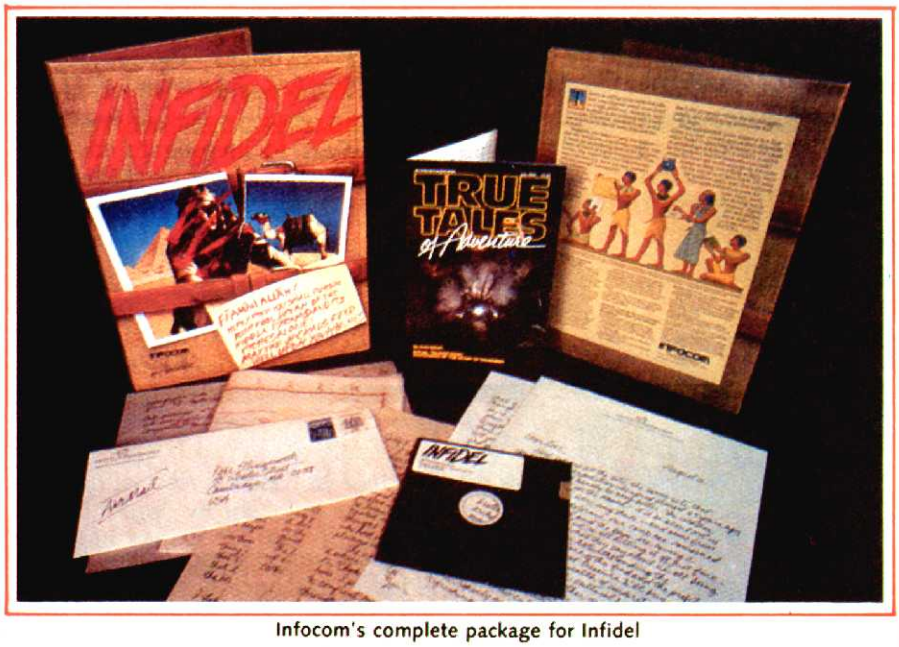
The first release in Infocom's "Tales of Adventure" series, **Infidel** is a full-text adventure set in twentieth-century Egypt. Packaged with an attractive vellum map, a partial hieroglyphics translation key, a well-written instruction booklet, an Egyptian stamp and two humorously-written letters that explain the scenario so far, *Infidel* is a treat just to open.

Our hero is not exactly presented as the Indiana Jones type as he wakes from a drugged stupor to find himself alone in his once-bustling campsite, left to die by a mutinous digging crew. Here he must find all the equipment he'll need to survive the perilous journey even farther into the desert. The object of his quest? A long-buried ancient pyramid rumored to house vast, priceless treasures.

Overlooking even one item might cause the neophyte archaeologist to die in the desert — or be unable to enter the tomb, if and when he finds it.

Like all Infocom games, *Infidel's* In-

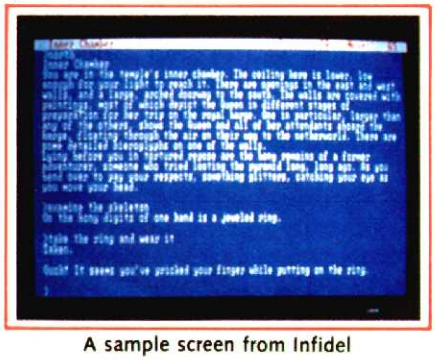




Infocom's complete package for Infidel

terlogic programming makes it capable of understanding a wide vocabulary of sentences and commands. The program is extremely user-friendly, even pointing out to the player any words or phrases it doesn't understand, and so eliminating the frustrating word-guessing games found in less developed adventure games.

The prose itself is colorful and well-



A sample screen from Infidel

written, its style far more serious than most other Infocom releases. Given the storyline, this adds flavor to the gritty, urgent mood of the scenario. Adventurers weary of "cutesy" touches will find the writing style a welcome change.

Infidel offers plenty of challenge, especially once the player has gained access to the lost tomb. (It's definitely easier if the player has the right mindset — Just don't let *anything* stand in your way!)

The game's ending is a definite surprise twist that will delight some gamers and infuriate others, but either way, it won't leave archaeological explorers cold.

(Tracie Forman)

THE DARK CRYSTAL

Sierra On-Line/Atari, Apple, and IBM-PC/48K disk

In the peaceful valley of the Stones, UrSu, leader of the Mystics, lies dying. It's time to summon Jen, a young Gelfling found and fostered by the evil, all-powerful Skeksis. The Gelfling must be told of the prophecy that doomed his people to destruction: the lost Shard of the Dark Crystal shall be replaced by Gelfling hand at the time of the next great conjunction of the suns, and thus, the reign of the Skek-

So begins **The Dark Crystal**, Sierra On-Line's impressive illustrated adventure based on Jim Henson's movie of the same name. Those familiar with the Muppet-filled epic will find all its major elements and characters intact, but with enough puzzles to insure that players can't solve this adventure by seeing the movie. On the flip side, the game stands on its own as well as any other adventure on the market, so familiarity with the film isn't essential to solving the game.

The packaging is beautiful, coming with a parchment-colored instruction booklet and a full-color poster of Jen and the Crystal. There are plenty of stills from the movie, as well as a detailed history of the land which provides all the background gamers need to start play.

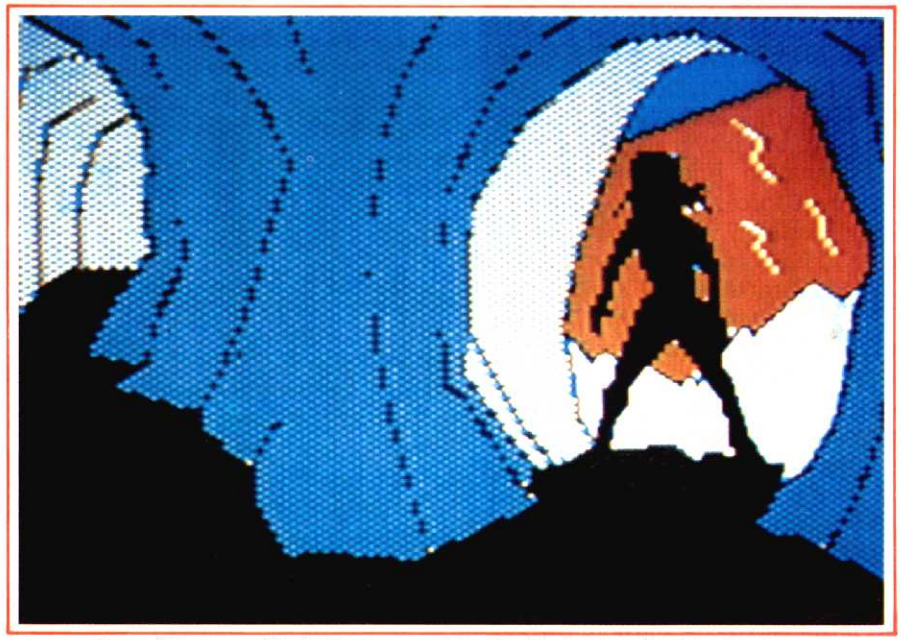
As is typical of illustrated adventure games, players command the computer by typing in simple two-word phrases like "Go Door" to enter a room. Tips on how to enter information — and on mapping the area — are contained in the instruction booklet.

As if the strategy elements in the game didn't make Jen's quest hard enough, the Skeksis have sent our loathsome tattletale Crystal Bats to track down the hero.

The illustrations for *The Dark Crystal* are outstanding. More than just the essence of the film's riveting visuals has been captured on disk, the result of three graphic artists and a graphics director working full-time.

Not only is *The Dark Crystal* challenging as Sierra On-Line's other illustrated adventures, but the program displays a surprising sense of humor.

COMPUTER GAMING



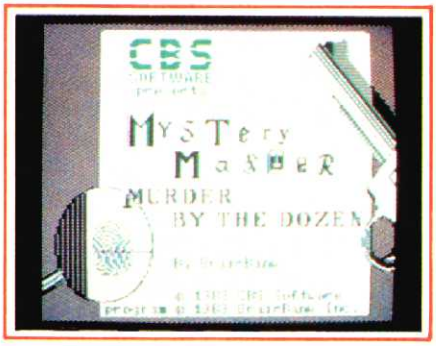
One of the many illustrations comprising On-Line's *Dark Crystal* adventure

The computer wisecracks, talks back, and makes terrible puns on a certain wine commercial, putting the game in a league above some less-finished adventure programs.

All in all, this is one of the prettier illustrated adventure games around, and its playability is excellent. while smaller in scope than some of Sierra On-Line's earlier games (like **Time Zone**), it's sure to provide hours of challenging play for seasoned adventurers and neophytes alike.

(Tracie Forman)

THINK TANK



MURDER BY THE DOZEN

CBS Software/Apple II and C-64/48K disk

If this installment in the projected "Mystery Master" series is a fair index of things to come, let's have more, more and yet more of the same — and as quickly as possible, too! One to four sleuths compete or cooperate to solve any of the dozen cases set in the all-too-typical city of Micropolis.

Setting up the game is easy. The detectives choose any of the 12 possible cases, enter their names and, one by one begin the investigations designed to lead to an accurate solution in the shortest possible time.

Each player receives a record-keeping sheet that shows a map of the city and includes space for noting the results of interviews with witnesses and searches for physical evidence. The map shows 28 possible locations, though only a fraction of that total is used in any one case. A building can represent one thing in a case and mean something else entirely in another.

The play mechanic is ingenious and does much to maintain the suspense during the course of the game. When a detective starts his or her turn, an on-screen menu lists the choice of activities in which the investigator may engage at that location. Generally, there's an opportunity to talk to a few people, possibly search the premises and maybe examine a piece of potential evidence more closely. When the flatfoot inputs a choice by hitting a numerical key, the program responds by printing a series of code numbers. The detective then looks up each number in the 46-page clue book. Each entry forms part of a sentence, and all the citations, when read in a string, usually impart one or more pieces of information. Each action taken by a detective uses up precious time and is recorded in a running total by the program. The detective gets rated at the end of each case, and total elapsed time of the investigation is the crucial factor used to determine whether the computerist is a World Class Detective or just an inept bumbler.

Eventually, a detective will be ready to crack the case. He or she does this by explaining the solution to the other participants, making sure to answer all the questions posed by the case history. The accuser then uses a special overlay sheet in conjunction with a solutions book to decipher the correct answer out of sight of the other players.

Murder by the Dozen differs from most other computer games in that it is clearly closed-ended. That is, there is a finite number of cases, 12, and when those are exhausted, about all you can do is pass the disk on to a friend or just give it an honored place in your software library. This would be a more serious flaw if *Murder by the Dozen* didn't have so many intriguing cases.

The graphics in *Murder by the Dozen* are virtually non-existent, though the occasional visuals such as the case selection screen are adequate. It's debatable whether the addition of full-color hi-res drawings of each location would have added all that much to the players' enjoyment. *Murder by the Dozen* is played more in the mind than on the screen.

(Arnie Katz)

ELECTRONIC PRESSBOX

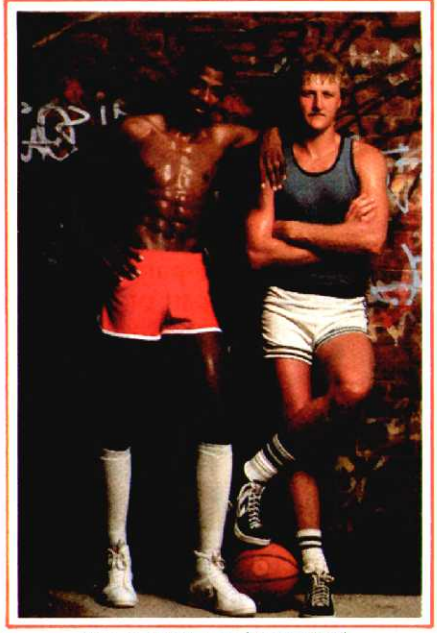
ONE ON ONE

Electronic Arts/Apple II/48K disk

This simulation of a half-court head-to-head showdown between Larry Bird of the Boston Celtics and Julius "Dr. J." Erving of the Philadelphia 76ers is the most important new game published so far in 1984. When you watch a machine-directed Erving drive the baseline, whirl 180 degrees, sail to the hoop and dunk it for two points, the phrase "machine intelligence" is certain to take on new, more concrete meaning.

One on One leaves other programs in the dust because for the first time the gamer is manipulating something more complex than an animated cursor. Bird and Dr. J. are designed to reflect real-life skills and tendencies. So although *One on One* plays as fast and furiously as any action classic, the abilities and limitations of the competitors have a big influence. For instance, Erving can jump higher, stay in the air longer and perform a few extra fakes and moves. Bird is a better outside shooter and rebounder.

The program permits play against a computer-controlled foe or, by adding one of several peripherals that allow the Apple to hook up two joysticks,



The real Dr. J and Larry Bird

head-to-head with human coaches. The game can be played to a set score or as a timed contest lasting four quarters. Again, the length of time allotted per quarter can be varied. Four skill levels give the armchair hoopster a chance to learn the game without frequent foul calls by the ref, while the "Pro" setting features both faster play and a more intrusive zebra.

Fatigue is crucial in *One on One*. The more moves, especially on defense, a player makes, the more quickly his energy evaporates. Dribbling in place to slow the tempo of play is the best way to recoup lost stamina. The computer is noticeably more efficient than humans in controlling fatigue, but this actually makes solitaire play a little more stimulating than might otherwise have been the case.

If either athlete makes an outstanding basket, the computer breaks the action to run an Instant Replay. Although the machine isn't infallible when it comes to choosing highlights, it catches many of the good ones. Another marvelous touch is that a point-blank slam dunk sometimes breaks the backboard. Action is then suspended while a maintenance man sweeps up the debris and sasses the player responsible.

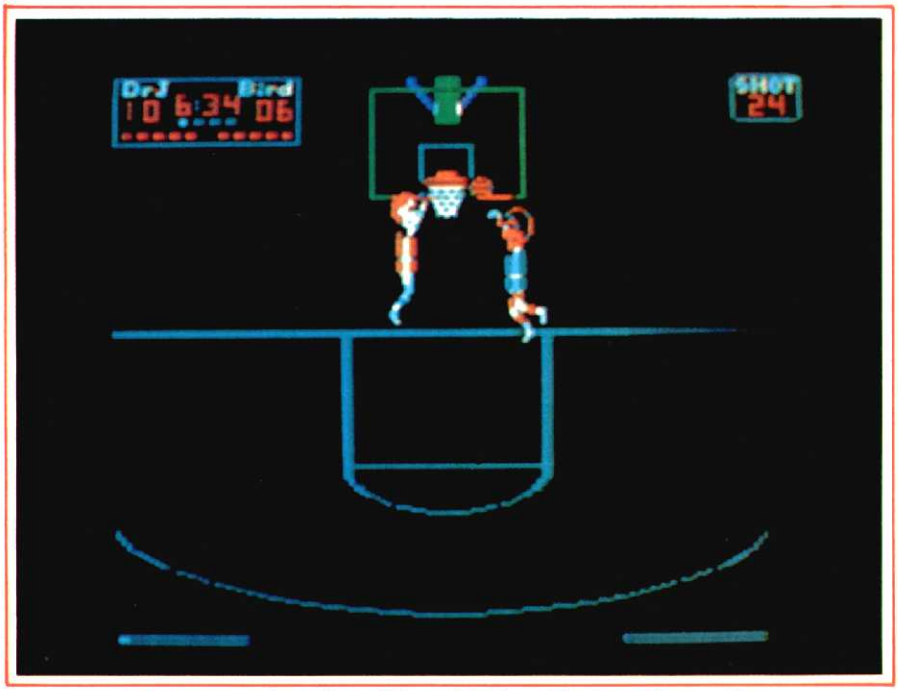
One on One is so outstanding overall that it hurts to see some of the little rough spots that have remained in the final, published version. It is sometimes possible for a human-directed player to pin the rival all-star to one spot on the floor until the shot-clock winds down, and there's at least one spot to which a human-guided ball-handler can retreat and the computer-directed man will not follow.

An error in judgment has also resulted in the Apple II edition turning out less than optimal for that system. There's no reason that shooting and mid-air turns should not be tied to separate action buttons. It's too easy, in the heat of play, to loose a shot — possibly having to cough up the ball in the process on a procedural foul — when what you really want to do is turn your man around. Just because these functions will have to work off a single button in the Atari and C-64 editions is no justification for setting it up that way on the Apple. A machine's capabilities should be used.

These comments notwithstanding, *One on One* is a landmark in the history of computer gaming. This simulation-in-depth is destined to have electronic gamers of every stripe — action fans, sports lovers and video strategists — going into overtime play for many months to come. It's championship quality.

(Arnie Katz)

COMPUTER GAMING



Dr. J goes up for a shot while Bird looks to block it in *One on One*

GOLF CHALLENGE

Sierra On-Line/Atari/18K cassette

No longer is it necessary to lug those heavy clubs through the rough. A relaxing sport to begin with, golf Sierra-style is even smoother.

In **Golf Challenge**, any number from one duffer to a full foursome can swing those irons and chase that little ball up and down the fairway.

If 18 holes with a par 72 sounds too exerting, then opt for the shorter version and play only nine — the first or the second — for a par 36. Whatever the chosen options, the gamer gets to test his or her skill not only on the fairway, but also on the green.

At the start of each hole, the golfer must walk up to the tee, size up the shot, address the ball and swing. As in the actual game, the angle of the shot and the force of the swing decide where and how far the ball goes. There are no **Pong**-like swings in this game; the player must first use his backswing and then gauge himself as he swings forward. If the putter is lucky enough to drive the ball without ending up in the rough, the sandtrap or the pond, then he might find himself on the putting green. This second screen is a closeup of the green, showing the cup. At this point, controlling the swing is very important. Putt too hard, and the ball might sail back on the fairway; too little, and the golfer might end up with a par 60 on just the first hole.

The game has some nice graphics and amusing play-action. For example, if a ball hits a tree, it falls — dead — to the ground.

(Vincent Puglia)

PLAYING IT SMART

WORDRACE

Don't Ask Computer Software/ Commodore 64/disk

Not all educational games are for kids. Here's one that packs a payload for all ages. **Wordrace** is a vocabulary expander for one to four players, who take turns racing the clock to find correct definitions. It's a good test of vocabulary knowledge, and that won't hurt anyone, no matter what age.

Players choose the skill level and how many words to make up the round. Although the program allows entry of any number up to 1000, 10 or 20 words make a good contest whether for multiple players or one person against the computer. Then enter the number and names of the players.

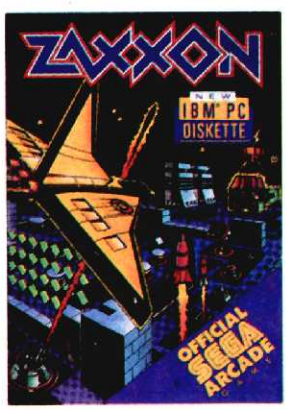
The game is extremely straightforward and easy to understand. The computer displays a word, then offers six definitions. The gamer chooses by pressing keys 1 through 6. Each player keeps guessing until he or she hits the right answer or time runs out. Then the computer puts a box around the number of the correct answer so the gamer will learn that definition.

Wordrace contains four skill levels, as well as two additional contests. Beginner's Wordrace is for kids from 9 to 14. Words are quite varied in difficulty, from simple ones like merry, quiz and arrive, to more difficult challenges like authentic, monotony and creature. Intermediate Wordrace is for older teens and adults who have mastered the beginner's game. Aroma, vertigo, blemish and timber are samples of intermediate level words. Regular Wordrace is for college age students and adults, and this is quite ambitious for anyone who lacks an extensive vocabulary. This level is recommeneded by Don't Ask as a study tool for college entrance exams, civil service tests, or any other situation where vocabulary skills are important.

Challenge Wordrace will stump even players with large vocabularies. Although all the words are English, a round or two of this could stymie even a lexicographer, as well as giving crossword puzzle fans some real fuel. Galericulate (covered with a hat), satrapess (a despotic official), and splore (to brag) are samples from this round.

The last two contests, Claim To Fame and Sports Derby, are played just like the Wordrace games, except that instead of a word, the computerist is presented with a name and six possible claims to fame. The people in Claim To Fame can be entertainers, historical personalities, authors, artists, or from any cultural background. The Sports Derby tests players' knowledge of sports trivia.

The clock counts downward from 600 on each challenge, and the gamer scores the points left when he gives the correct definition, but loses that number if he gives a wrong answer, so it's bad strategy to guess (except in the beginning of the contest when the



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score is at zero.) There are 2500 words in Wordrace and 1200 names in Claim To Fame and Sports Derby, so gamers are not likely to exhaust the program very quickly.

The graphics are quite minimal. Words, the current player's name, definitions, instructions and score are displayed in white letters against a blue background. Sound effects are also kept to a minimum. A wrong answer produces a buzz, and a correct guess gets a chime.

Wordrace is perfect for youngsters who need a little help in gaining a better vocabulary, or adults interested in the same kind of self-improvement. One thing for certain, there's just no way to play this game without learning something. After a round of Wordrace, what I really want to do is galericulate my head, go see the satrapess that edits EG, and splore to him about all I've learned!

(Joyce Worley)

STICKYBEAR OPPOSITES

Designed by Richard Hefter, Janie & Steve Worthington/Weekly Reader Family Software/Apple/48K disk

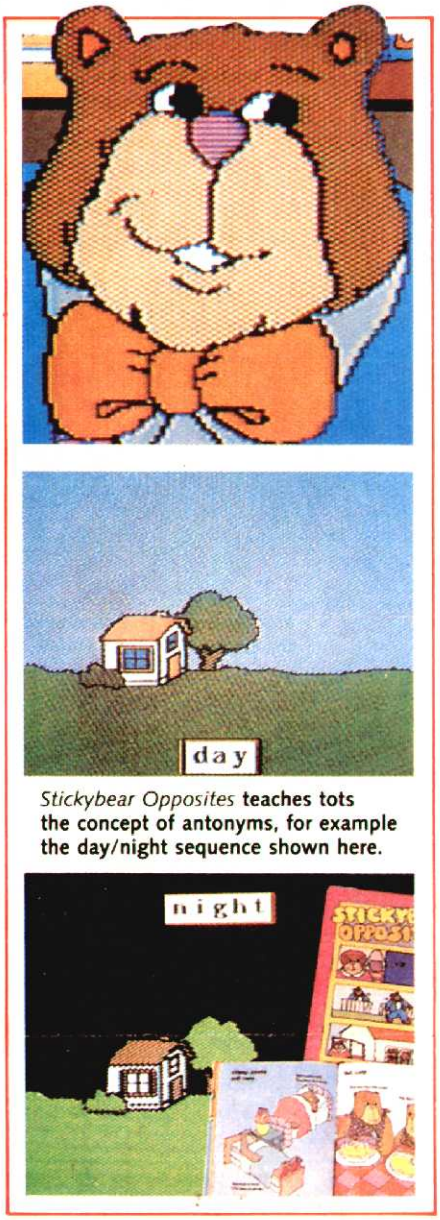
Stickybear, Richard Hefter's lovable bruin, returns in a program for kids ages three to six, **Stickybear Opposites.** It's especially designed to teach preschoolers the concept of opposites, using graphic illustrations that vividly depict sets of words.

The program is unusually easy to use, so even an unsupervised child should have no trouble with it. Each set of opposites is presented in the same manner. First the screen displays the word, for example, under, and the picture that goes with it—an airplane flying under a bridge. Pressing an arrow key changes the scene to the opposite, over, and the airplane flies over the bridge. The scene changes back and forth between the two words and their accompanying illustrations just by using the keys; then, when ready for a new word, press the space bar for a new set of opposites.

Stickybear Opposites illustrates such concepts as day/night, off/on, inside/outside, slow/fast, in front/behind, light/dark, closed/open, and happy/sad. It's the pictures by artist Hefter that elevate this program to such heights. For the word day, there's a bucolic scene with a pleasant cottage under sunny skies. Toggle the key for its opposite: the same cottage under a night sky, with chirping insects providing an evening symphony.

The illustrations are superb. Hefter is one of the foremost children's artists working in the computer field at present, and the Stickybear series of programs is uniformly excellent. The pictures in *Stickybear Opposites* look exactly like cartoons from children's books. Most are animated, and there are over 30 sets of opposites illustrated with child-pleasing pictures that make it easy to understand the sugar-coated lessons they teach.

The program comes with excellent backup material. Included in the package is a Stickybear Opposites poster with pictures from the program. This is useful for parents who want to reinforce the lessons from the program, as well as being a colorful and attractive ornament for the wall. Also included is a book by Richard Hefter, "Yes and No, A Book of Opposites". This is perfect for helping younger children grasp difficult concepts. Not only will they enjoy looking at Hefter's excellent drawings alone, but the book lends itself very well to parental guidance and supervision. There's also a sheet of eight Stickybear stickers for kids to use as decorations.



Stickybear Opposites **teaches tots the concept of antonyms, for example the day/night sequence shown here.**

A parent's guide thoroughly explains the program, then gives some excellent suggestions on how to use *Stickybear Opposites* to help kids get the most from it.

But the best thing about *Stickybear Opposites* is that it's so easy to use. that no guidance is really needed. Once the parent shows little Molly how to change the pictures, she should be able to absorb the lessons while amusing herself at the computer keyboard.

(Joyce Worley)

WORDSEARCH

T&E Software/Commodore 64/cassette

Another program in T&F's "SearchSeries," **Word Search** gives players a choice of three word categories: States/Capitals, Jumbled, or Animals, and the objective is to find the twenty words of your selected category under the time limit.

As with the other SearchSeries games, **ArcadeSearch** and **SportSearch**, the keyboard of the C-64 is used to type in the entries at the prompt at the bottom of your video screen. Correct entries are highlighted on the grid, which will contain 10 horizontal and 10 vertical words to be found. The C-64 holds over 300 words in memory and generates a new grid each game, so every game will be different from the last. There are literally thousands of combinations possible.

WordSearch affords quite a bit of educational value in that it tests your knowledge of the 50 states and/or their capitals, names of animals and a potpourri of random words. It will help increase your perceptual capabilities as well as your knowledge. Bonus points are awarded for completing the grid in less than the 10-minute (600-second) time limit.

Play-action, graphics and entertainment values are good, but high scores are not retained, so you'll have to keep notes if you so desire.

(Tom Benford)

arcade sound

If you own a Commodore VIC-20, you can have arcade-quality sound while playing your computer games by routing the sound signal through your home stereo system. There are several ways of achieving this, and we'll cover the other methods for VIC-20s, Commodore-64s, Ataris and other systems in later parts of this series.

The parts needed are available from Radio Shack, and I've included their part numbers as well as prices here (equivalent parts can also be had from any well-stocked electronics supply store). Total cash outlay for the parts should be well under $5.00.

PARTS LIST

1 "Y" Connector (2 RCA to ⅛" mini plug) Radio Shack #42-2153. Price: $1.89
1 ⅛" Mini Phone Jack (2 per pkg.) Radio Shack #274-297. Price: $1.19
1 3" piece of insulated light stranded wire. Price: $ .05

TOOLS NEEDED

Electric Drill
¼" Drill Bit
Phillips Screwdriver
Pliers
Wire Stripper
Soldering Iron
Rosin-core Electronics Solder
Small piece of electrical tape

CONSTRUCTION

Start by removing the Phillips-screw on the RF modulator box and then slide off the metal cover (*FIG. 1*). Inside you'll see a silver-colored rectangular box—this is the modulator (*FIG. 2*). On the end nearest the channel selector switch there are some wires connected to it. The yellow wire carries the audio signal to your televi-

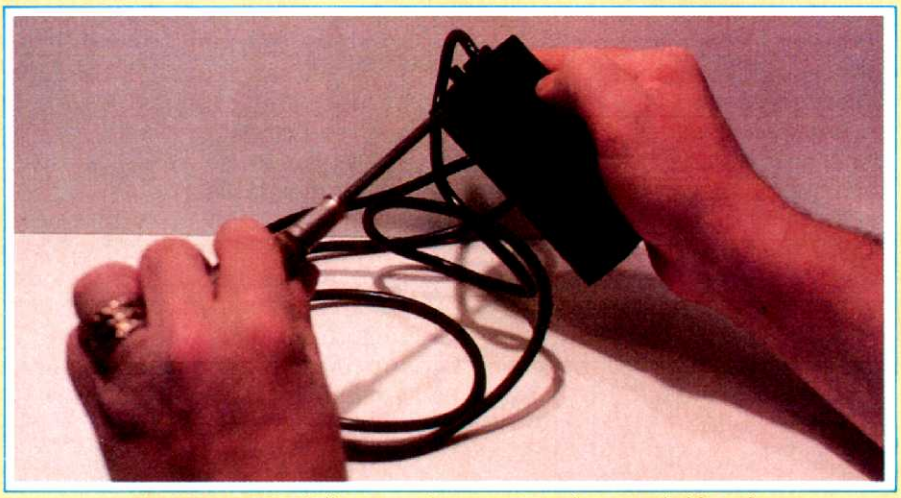


FIGURE 1: **Using a Phillips screwdriver, remove the screw holding the RF modulator box together. Then slide off the box's cover.**

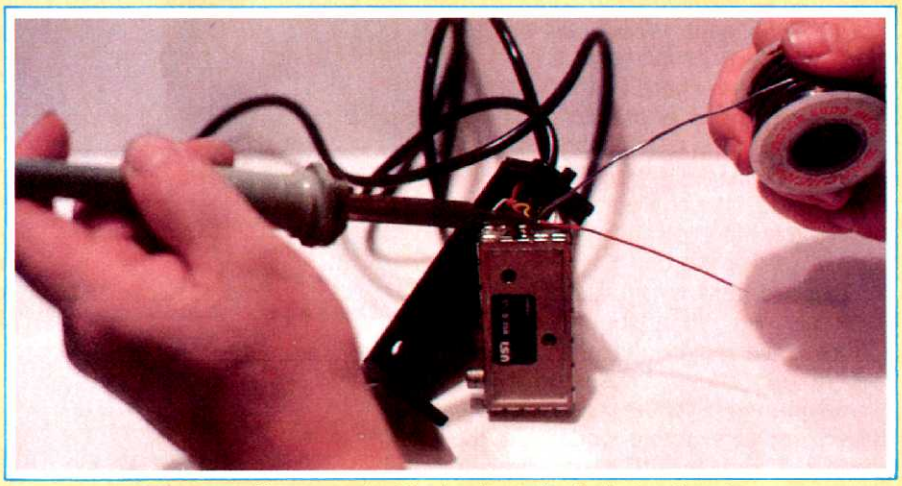


FIGURE 3: **Solder one end of the hook-up wire (red wire shown) to the terminal that the yellow wire is connected to.**

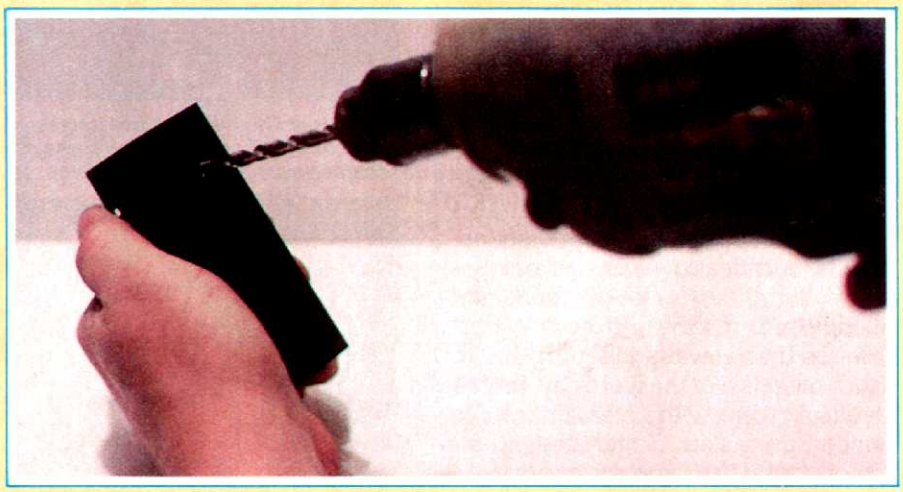


FIGURE 5: **With the ¼" drill bit, drill a hole through the modulator cover, approximately ½" from the screw hole.**

for your VIC-20

Hooking Up Stereo Sound for Under $5

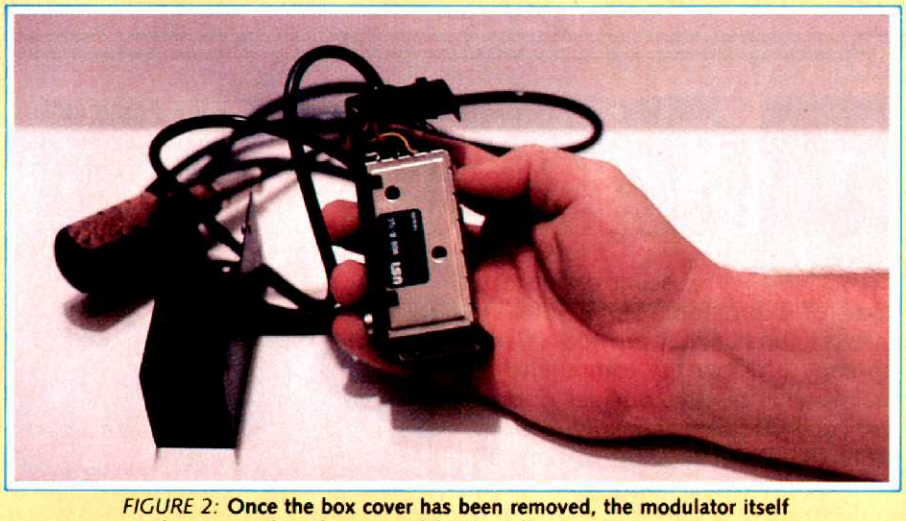


FIGURE 2: **Once the box cover has been removed, the modulator itself can be seen and easily accessed for the following steps.**

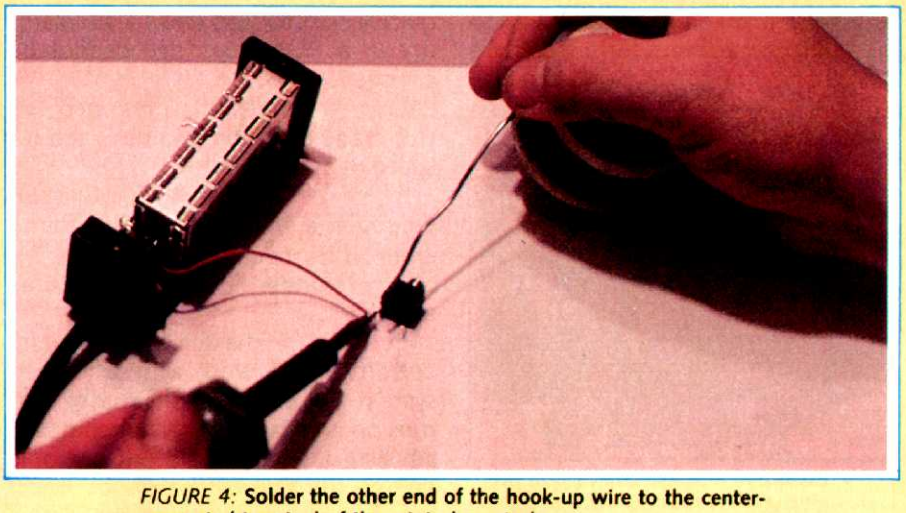


FIGURE 4: **Solder the other end of the hook-up wire to the center-connected terminal of the mini-phone jack.**

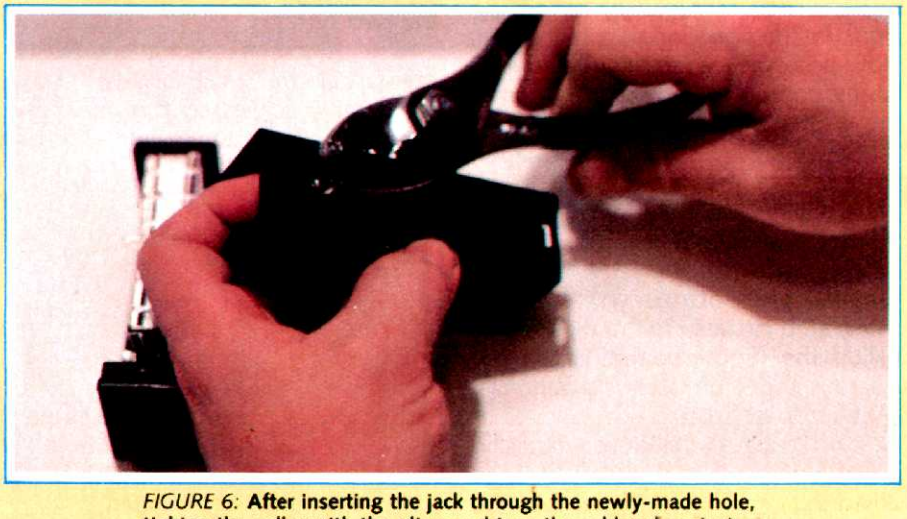


FIGURE 6: **After inserting the jack through the newly-made hole, tighten the collar with the pliers and tape the soldered contact.**

sion set, and this is the one we're interested in. Carefully slide out the modulator from the clips, then strip the insulation from both ends of the 3" piece of hook-up wire and solder one end onto the terminal that the yellow wire is connected to (*FIG. 3*). Now solder the other end to the center-connected terminal on the mini-phone jack (the center terminal is the one with the spring attached—*FIG. 4*). After these two connections are made, you can unplug the soldering iron.

Now drill a ¼" hole in the RF modulator cover ½" down from the screw hole (*FIG. 5*). Insert the mini-phone jack through this hole and tighten the retaining collar with the pliers (*FIG. 6*). After tightening, place a small piece of electrical tape over the soldered contact on the bottom of the jack. Now replace the cover on the modulator box, then insert and tighten the screw.

That's it for the assembly!

CONNECTING TO YOUR STEREO

Connect the modulator cable to your VIC, plug the "Y" connector into the mini-phone jack, and the RF modulator into the switch box (attached to your TV's antenna leads). Use a pair of stereo speaker extension cables to go from each jack of the "Y" connector to the left and right tape input or auxiliary input jacks on the stereo. Turn on the computer, insert a game and — voila — instant arcade sound! You can also get a third sonic direction by leaving the volume on the TV turned up, or turn it down completely and hear the sound coming from your stereo speakers. Best of all, the RF modulator will perform as it did before with the TV, but now you have the option of distributing the sound through your stereo or amplifier as well.

The Illustrated ELECTRONIC Gaming

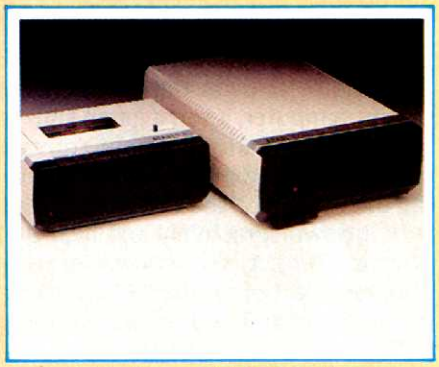
One of the most exciting aspects of the electronic field is its constant state of flux. No sooner does an individual come to grips with the technology and its associated vocabulary than another innovation appears, bringing with it new ways of describing things. To help keep **EG's** *readers from drowning in a sea of jargon, we proudly present our second glossary of the gaming world. This is still only a partial list, but it does include commonly used terms.*

A

Access time: the amount of time it takes to find a specific piece of information in storage and bring it into memory. Generally speaking, the faster the access time, the faster the program can run. Cartridges require the least amount of access time, then disks, then tapes.

Assembly language: a very low-level, quick-access, programming language that uses mnemonic coding. Most "hand/eye" games are programmed in Assembly language.

Auxiliary storage: any medium, besides the computer's main memory banks, which can store and save information. The most common forms of auxiliary storage are tape and floppy disk.

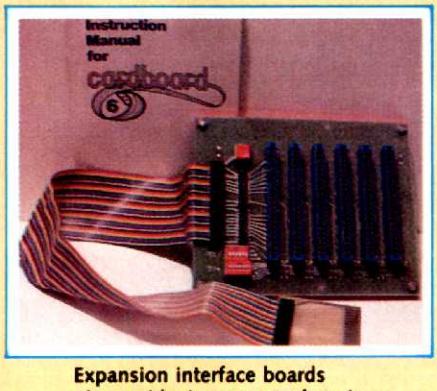


Disk drives and data recorders: both auxiliary storage devices

B

Back-up copy: a second or duplicate copy of a program. Some software manufacturers either provide a back-up copy or allow the computerist to make one in case the original, or master, copy is lost or damaged. Making more than one back up is generally considered piracy and punishable under copyright laws.

Bank switching: a programming technique that enables information to be switched back and forth from two RAM banks.



Expansion interface boards give resident memory a boost

Basic *(Beginner's All-purpose Symbolic Instruction Code):* a high-level, slow-access, programming language. Many computer "adventure" games are written in Basic.

Bit: the smallest unit of information used by a computer. A sequence of eight bits, a byte, can represent either a letter or a one-digit number.

Board *(Circuit board):* a thin rectangular piece of plastic that houses integrated circuits. The main board is called the motherboard. When the board is added on later, it is generally referred to as a card.

Boot: to load, usually automatically, a program from an auxiliary storage device, such as a disk drive, into the computer's memory.

Bug: an error in the programming that prevents the program from running properly. A bug can be something as simple as a typo in the coding or something as drastic as a flaw in the programming logic.

C

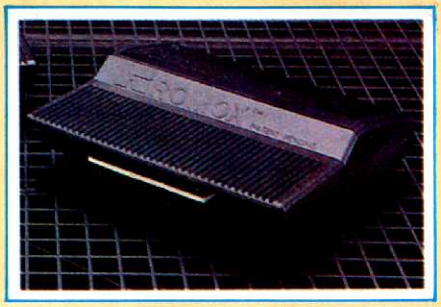
Cartridge *(ROM cartridge):* is a pre-programmed circuit board contained within a plastic case that is easily and quickly booted into RAM. The memory in a ROM cartridge cannot be changed.

Chip: a wafer-thin, integrated circuit made of silicon and designed for specific tasks.

Coin-op: a coin-operated videogame machine usually found grouped in arcades. Sometimes, a coin-op is referred to as a "quarter snatcher".

Compatible: the ability of hardware or software to work with any given system. For example, a cartridge that runs on an Atari 2600 is not compatible with a Commodore 64: not only due to the size of the plastic housing, but also because of the different programming commands used by the two systems.

Computer: a device that has a CPU, memory and I/O capabilities. Of the three major types of computers — mainframes, minicomputers and microcomputers — the micro is the one



Cartridges are the fastest-loading program medium.

DICTIONARY

Jet-Age Jargon for Arcade Aces

By THE EDITORS OF ELECTRONIC GAMES

Computers come in many forms. Micros are most popular at home.

generally used by gamers.

CPU *(Central Processing Unit):* the chip that acts as the "brains" of the computer or videogame system by interpreting and executing instructions.

Crash: a failure of the machine to operate because of a malfunction in either the hardware or software. A crash is not always fatal.

CRT *(Cathode Ray Tube):* the picture tube of a TV screen or video monitor used to display characters or graphics.

Cursor: the indicator that appears on the screen to show where the next character will be printed.

Above: A computer monitor. Below: An on-screen cursor.

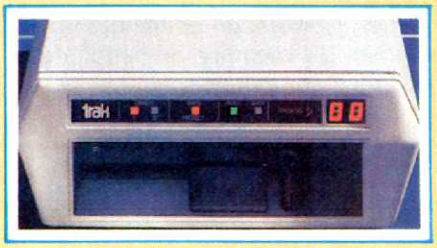
Daisy wheel printer: an impact printer used for letter-quality type whose print element resembles a daisy.

Data recorder *(Cassette Recorder, Tape Recorder):* a peripheral that stores and retrieves information sequentially on cassettes.

Data recorders store programs on cassette, but load slowly.

Difficulty switch: a toggle which enables the user to set the difficulty level of certain games.

Disk: a magnetic device used for the random or sequential storage of data or programs. Also called floppies, the disks used by gamers are made of plastic and surrounded by a cardboard sleeve. Any contact with the actual disk inside the sleeve can cause damage to the program or data.



Disk drives: fast-loading

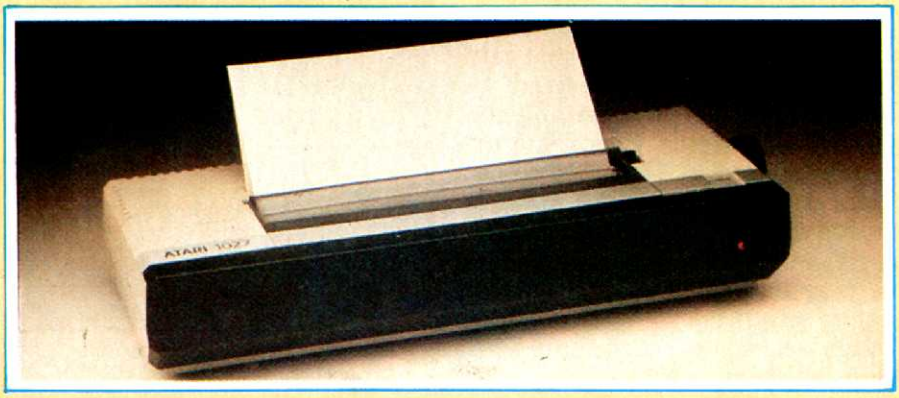
Disk drive: a peripheral that enables the computer to save information onto, or retrieve it from, a disk. A dual disk drive is just that — two disk drives in one unit.

DOS *(Disk Operating System):* the group of programs that maintain the files on the disk. Besides keeping file locations and deciding space allocation, some DOSes allow the user to format and copy disks.

Dot matrix printer: a peripheral device that prints characters by using small dots in a pattern. Most of the printers use a 5 by 7, or 7 by 9, matrix. Although the quality is not as good as that of a daisy wheel printer, it *is* faster.

Double density disk: a disk which stores twice as much information as usual per side. This should not be confused with double-sided disks, which can have information stored on both sides.

Printers come in two types: dot-matrix and daisy-wheel printers.



EPROM *(Erasable Program Read Only Memory):* a PROM cartridge that can be re-programmed a number of times by the user with appropriate equipment.

Expansion board: a board which enables users to add additional cards, whether for memory or peripherals, onto their computers.

Floppy disk: see disk

Formatted disk: a disk already "initialized" (made compatible) for a specific computer so that information can be stored or retrieved from it.

Function keys: those keys which allow the computer to perform specific tasks. Many computer games use function keys to set difficulty levels and choose specific options.

Glitch: see Bug.

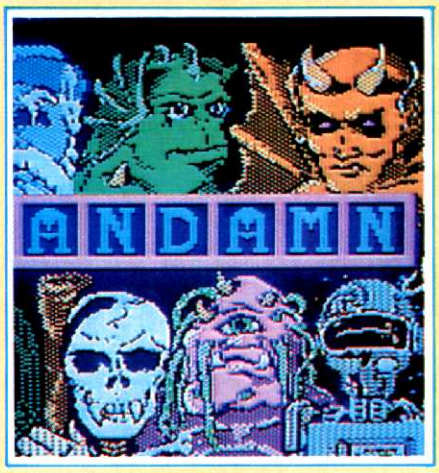
Graphics tablet: a peripheral used for drawing objects which are then displayed on the screen.

Hand-Held: a portable, battery-operated videogame system that can be held and operated in the hand.

Hardware: the physical objects which make up the videogame or computer system. Sometimes the fine line of distinction between hardware and software can be confused. For example, a floppy disk is hardware, but the program printed on its magnetic coating is software.

High level language: any programming language, such as Basic and Cobol, that simulates human language. High level languages require more access time than low level languages, such as machine language and assembly language.

High-Res graphics *(High resolution graphics):* a type of graphics that displays more detail because the program can address more individual pixels in a given area. Low-resolution graphics tend to be blockier and less detailed because the program can only address large areas of the screen.



Hi-res graphics feature more detail and subtlety of form.

Impact printer; a printer that prints characters by striking a ribbon onto the paper.

Input: any form of data that is fed into a computer or videogame through the use of joystick, keyboard, auxiliary storage device, modems, and other computers.

Interactive programs: Any program which seems to interact with the user. Generally, adventure and educational games make use of interactive programming.

Interface: the hardware and/or software which enables peripheral devices to communicate with the computer.

I/O port *(input/output port):* the channel or connection used to connect the computer with I/O devices such as, paddles, disk drives and monitors.

Joysticks: the easiest way to input information. Just move the stick!

Interface devices are necessary in order to use a printer or modem.

Joystick: an input device used by gamers to control the movement of game characters. A joystick can also be used to move the cursor around the screen.

The old standard joystick is available in a wide variety of styles.

"Nobody races on my team until he's made it to Italy."

A Warner Communications Company

"TX-1 is a super real, multiple course layout that sizzles with the sights and sounds of 8 international Gran Prix Speedways. In fact, it's such a realistic driving simulation I can pre-qualify my whole team without risking any trashed cars! The driving challenges are real too! Fast. And precise! Like a simple turn to the right instead of the left at one of the final checkpoints can put you on Belgium's track instead of Italy's. And the incredible wrap-around action of the 3 screens really puts you in the race!

Blow the doors off everything else in sight. Get on the winning team."

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TX-1*

NEW FROM ATARI

K: abbreviation for kilobyte (a kilobyte actually contains 1,024 bytes). When a cassette or disk states that 16K are required, the user's computer must have at least 16 kilobytes of memory.

Keyboard: an input device which looks and acts like a typewriter. There are two main types in use: the standard typewriter-style keyboard and the monoplaner keyboard, which is made of a plastic membrane and is used on less expensive computers.

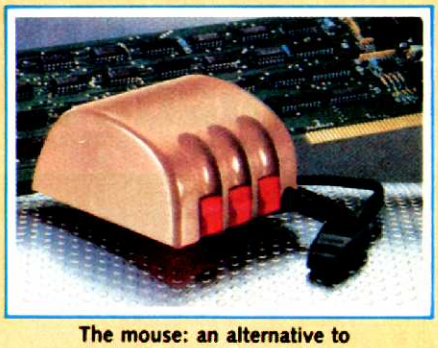
Keyboards are a must for word processing and adventure gaming.

Light pen: an input device that allows the user to draw on the screen electronically.

Load: a process by which programs are retrieved from auxiliary storage devices and entered into memory.

The light pen lets you draw on the screen itself!

Machine language: a low level language consisting of binary code. All other languages are eventually translated into machine language. Therefore, any game written in machine language runs faster.



The mouse: an alternative to joysticks, light pens, etc.

Main memory: the memory contained within the console unit. Main memory is divided into RAM and ROM.

Menu: a listing of the various options available to a user in a program. Certain computer games offer menus as a means of beginning a game at a level other than the first.

Micro *(Microcomputer):* see Computer.

Microprocessor: the main chip of the computer or videogame system, the CPU.

Modem *(Modulator-Demodulator):* a peripheral which enables a computer to receive and transmit data across telephone lines.

Monitor: see CRT.

Mouse: a peripheral that plugs into a joystick port and is used to move the cursor on the screen.

Multiplexer: a peripheral that enables a videogame or computer system to select one of many ROM cartridges for play.

Multiplexers let gamers plug in more than one cartridge at a time.

Network: an interconnected system of computers and peripherals so that users can share information and programs.

Numeric keypad: a calculator-like peripheral.

Operating system: the group of programs which maintain all of the basic "housekeeping" chores for the videogame or computer system, such as checking to see if the cassette recorder and monitor are connected.

Output: the end result of a program. The most common output devices are the monitor, the disk drive and the printer.

Paddle: an input device that allows gamers to control the game's character horizontally or vertically.

The paddle was one of the first gaming controllers ever devised.

Peripheral: any hardware device which is added on to the computer or videogame system to increase its productivity, for example, printers, modems and cassette recorders.

Pixel: a picture element, or dot, on a TV screen or monitor. The more pixels addressed by the microprocessor, the sharper the graphics picture produced.

Power supply unit: the device that converts the house voltage into the

Dictionary

smaller voltage needed by the various gaming devices.

Program: a set of sequenced instructions which enables the computer or videogame system to complete an action.

PROM *(Programmable Read Only Memory):* a ROM that can be changed by the user with the proper equipment.

RAM *(Random Access Memory):* that portion of the main memory which can be read and written to. RAM is always lost when power is turned off. When the user boots up a disk or cassette, loads in a cartridge, or

RAM boosters increase the computer's memory capacities.

writes in a program, it goes into the RAM portion of the main memory, where it is then run.

Raster graphics: a type of graphics that consists of building an object through the use of clustered dots. Raster graphics is used by most videogame and computer game designers.

RF modulator: a device which enables the microprocessor's composite video signal to be displayed on a TV screen.

ROM *(Read Only Memory):* that portion of the main memory which is programmed by the manufacturer to act as an operating system. ROM is also considered to be any memory which cannot be altered by the user, such as ROM cartridges. Unlike RAM, ROM is not lost when the power is turned off.

Scrolling: a programming technique allowing the characters on the screen to move vertically or horizontally in seemingly fluid motion.

Senior videogame system: any videogame system with over 4K of memory and high-resolution graphics capabilities.

Software: the programs which instruct the computer what to do. Software is usually bought on tape, disk or cartridge.

Split screen: a screen which has been divided into two or more areas. In gaming, the split screen is used to allow room for "radar screens" and written material. A split screen also occurs occasionally when the gamer causes the program to crash; in this case, one half of the screen may display the game and the other half may display the written program.

Stand-Alone games: the only truly portable electronic games-to-go.

Stand-Alone: a portable, battery-operated game machine which is independent of any other peripherals, such as a monitor.

Standard Videogame System: a programmable videogame system with 4K or less of memory and low-resolution graphics capabilities.

Syntax: the grammatical rules of a language, whether programming or otherwise. In adventure games, a certain syntax must be used in order for the program to be able to understand the user.

System: any connected grouping of two or more electronic components.

Table-Top: a stand-alone that is too large to be held in the hand and played.

Tape: a medium for the storage of data. Although tapes are inexpensive, their access time, especially during loading, tends to be overly-long.

Tracball: an input device that allows the user to control the motion of the game character by rolling the ball in the direction desired.

User friendly: a standard against which software and hardware are measured. If something is user friendly, then the user can learn and operate it easily.

Vector graphics: a type of graphics which creates images by drawing lines rather than by building clusters of dots.

Voice synthesizer: a peripheral which allows the microprocessor to simulate the human voice. Some systems are beginning to have voice synthesizers built into the console.

Some computers need voice synthesis modules to speak. Some don't.

Window: a section of the screen that is deliberately split off.

Wrap-around: a programming technique which allows a character to go off one side of a screen and reappear on the other.

Skin Your Friends At M.U.L.E.

Become Your Colony's Richest Citizen!

By TRACIE FORMAN and FRANK TETRO JR.

M.U.L.E. (Electronic Arts/Atari, C-64 computers/48K disk) is fast becoming a major craze among computer gamers. Winner of the 1984 Arcade Award as "Best Multi-Player Game", *M.U.L.E.* is a one- to four-player contest in which the participants strive to explore and exploit a habitable but deserted planet.

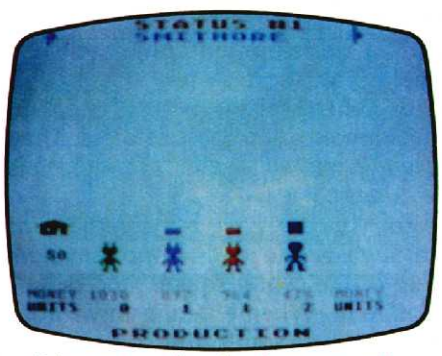
Each colonist must develop a strategy involving the supply and demand for materials which are vital to the settlement's survival. By buying and selling food, energy, smithore, and (in the tournament version) crystite, the players attempt to gain the economic edge over their human and/or computer-driven opponents. The player with the most assets at the end of the game is dubbed First Founder of the colony — assuming, that is, that all the cutthroat competition hasn't doomed the outpost.

In a sense, *M.U.L.E.* is a space-age cousin of such boardgames as Monopoly and Easy Money. Because it's the interaction between the players that causes the largest changes in the game situation, it's virtually impossible to take a "perfect plan" approach to this electronic strategy classic. Instead, this article will concentrate on providing some guidelines for developing your own individual strategies.

THE LAND GRANT

The first humble plot you choose is the basis for your future empire. Choose the location well. The first plot should be able to produce either food or energy, so go for flatland or river valley space. This guarantees that you'll be at least partially self-sufficient. Keep that first acre within easy striking distance of other flatland or mountain areas, and choose all subsequent plots adjacent to your first one.

Expertise bonuses are awarded to players who keep their lands tightly-knit. The more adjacent plots you have, the more you'll produce on each one. Likewise, producing the same commodity on three different plots rewards the colonist with more goods.



Prices go up when the store runs out!

If land goes up for auction, always try to buy it, especially during the earliest phases. Each plot has an estimated value of $500, but it's advisable to buy higher — if you have enough rounds left to produce plenty of goods. After the ninth round or so, if you pay too much for land, you probably won't be able to recover the cost from the goods produced on it. If

someone else is bidding higher than you and you *don't* intend to buy, push the line up anyway and pretend you want it. Then pull out at the last second and leave your opponent holding the bag. It's also advisable to leave yourself money to develop your brand-new plot, so never put all your cash on the line.

LAND DEVELOPMENT & PRODUCTION

Now that you've got your land, you have to decide what to do with it. Produce food? A good idea if you have river or flat land. Energy? The same. Smithore can't be mined in the wet river valley, and though it *can* be mined on flatlands, mountains are the ideal spot — the more mountains, the better!

Make enough food and energy to fulfill your needs. This will keep you from being at the mercy of your best friend, who's likely to announce cheerfully, "Food? Gee, I think I have an extra unit or two. But you'll have to *pay* for it!" Players who have a food shortage will find their next development turn cut short proportionately, and lack of energy means low production.

The real key to the standard game is to produce smithore. Lots of it. It has a high base price and the store will always buy it. If you produce smithore towards the beginning of the game and then don't sell, prices rise accordingly — and the colony experences a shortage of M.U.L.E.s.

The development phase always seems too short. A few time-saving tips: When walking outside of town, avoid mountains and river land. They slow you down. The fastest walking is accomplished by moving diagonally. Also, you don't have to enter town through its side roads. Touch any portion of the center square, and bingo! You're in. When entering town from the north or south, the character always appears directly in front of the inn.

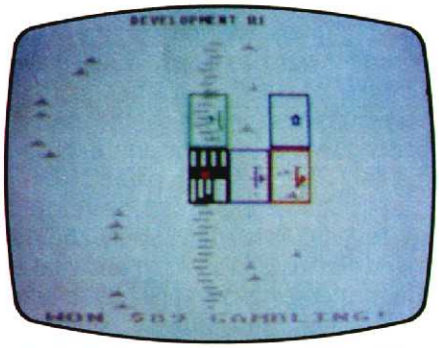
It's possible to switch M.U.L.E.s without having to remove the installed one. Just go into town, get the type of M.U.L.E. you want, then position your character directly over the installed M.U.L.E. Press the red button. If you've done it right, the production symbol changes and you now have the old M.U.L.E. in hand. If you do it wrong, the M.U.L.E. you just bought runs away.

During the tournament game, two

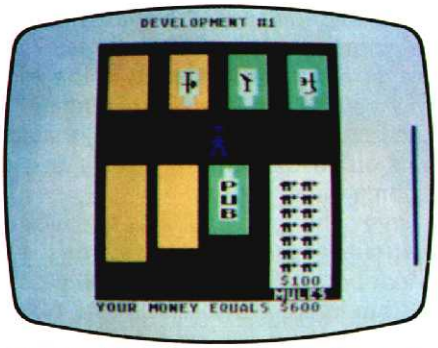
M.U.L.E.

definite rules apply. First, forget about smithore. Go for crystite. Second, if you have time left after developing your land, pay the assay office a visit and check around for crystite. Also watch other players' development turns because they'll be searching for the stuff, also.

Humans always start off with less cash.



Choose your first plot of land with care.



Time is of the essence during development.

THE AUCTION PHASE

All right, you just had the best development of your career. Now it's time to sell off the surplus and buy what you need. This is really the most crucial phase of the game.

First and foremost, don't ignore the value of psyching out the opposition (unfortunately, this only works on *human* opponents)! Hard-core M.U.L.E.ies know the value of a well-placed comment like, "Gee, the store looks a little low on energy. I'll bet there's a shortage coming up next turn." (This often fools the others into buying out the stock, so use it only when *you're* the one making the most energy.)

Always buy low, sell high. Low prices are: food, $15; energy, $10; smithore, $36-$43; and crystite, anything below $100. Even if you have a 20-unit surplus, *never* sell at these prices — unless you really need the cash for the next development phase. Let the whole crop rot before selling it to the store at a pittance.

If the store is stocked up on a particular item (therefore setting the price at a standard level), don't sell below the store's price — unless an opponent is lowering his or her price. Instead, perch right on the store's price line to get the highest price you can.

The price of necessities is always relatively low — that is, until the store runs dry. After that, anything goes, so keep an eye on what goods will be in high demand in a turn or two. It's always fun to watch the poor suckers offer hundreds of dollars for a unit of food! A good way to make sure the store runs out — don't sell!

If *you* have enough food and energy, but your opponents don't, seriously consider buying out the store if you can. That way, everyone suffers but you. . .and the price rises higher in the next auction!

Never sell anything during the final, 12th auction phase. The value of your goods remains higher if you don't.

IN GENERAL

If you have extra cash, buy smithore at $36 or $43, then sell it later when the price rises above $50.

In the tournament game, always try to grab any property hit by a meteor. It turns the plot into a super crystite-producer.

Above all, stay flexible. If you have six energy plots and the store has, say, twenty units, convert those energy plots to something that will be more profitable. Constantly try to second-guess your opponents about what commodity is next on the short-supply list. Try to make what your enemies aren't. That way, you can really gouge the prices, especially in the essential food and energy areas.

Stay cool, calm, collected, and above all, greedy. Nobody ever said the First Founder was a nice guy!

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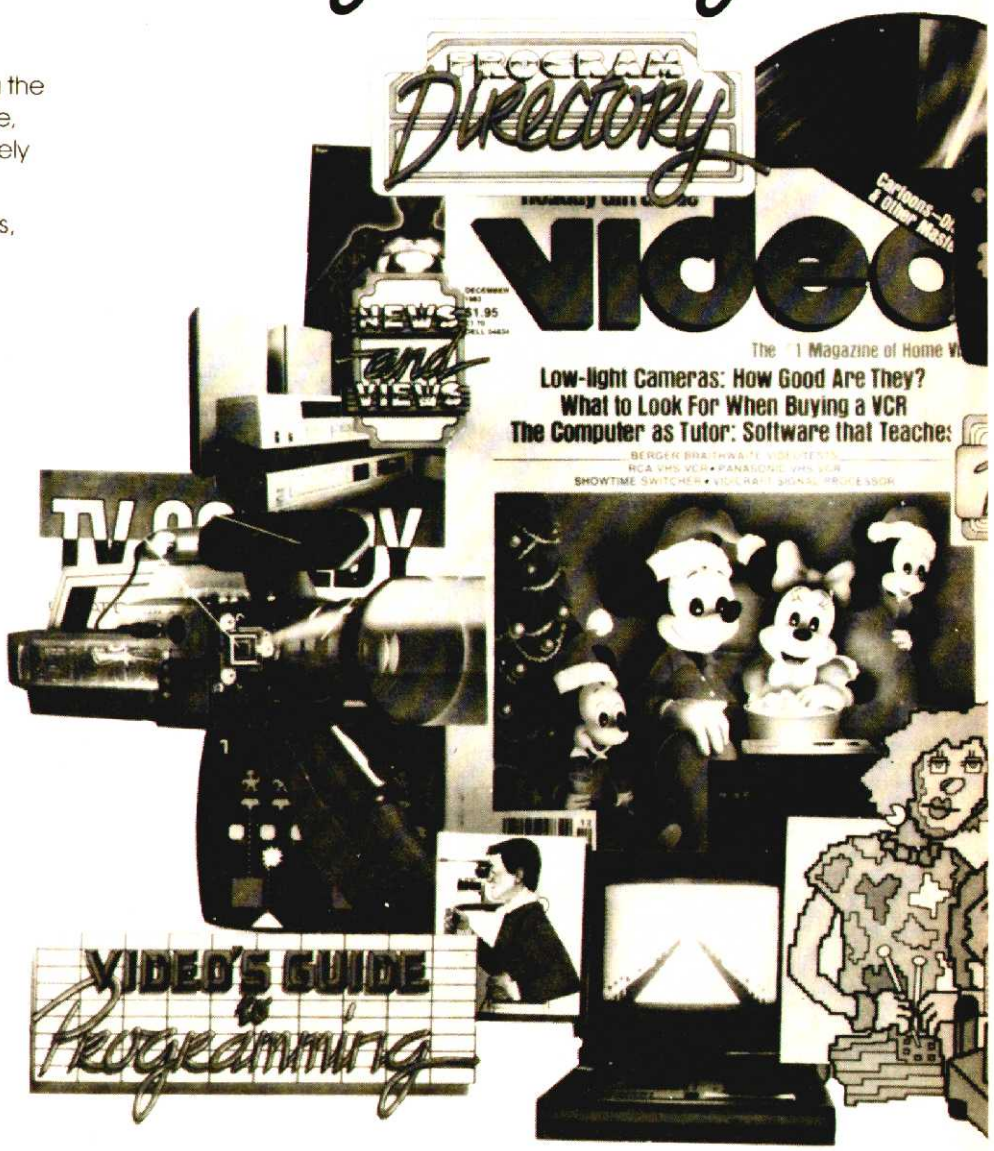
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All Star Electronics, Atlanta
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IDAHO
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ILLINOIS
BAC Video Saw Mart, Belleville
Devon Hobbymodels Inc., Chicago
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Video Tape Gallery, Chicago
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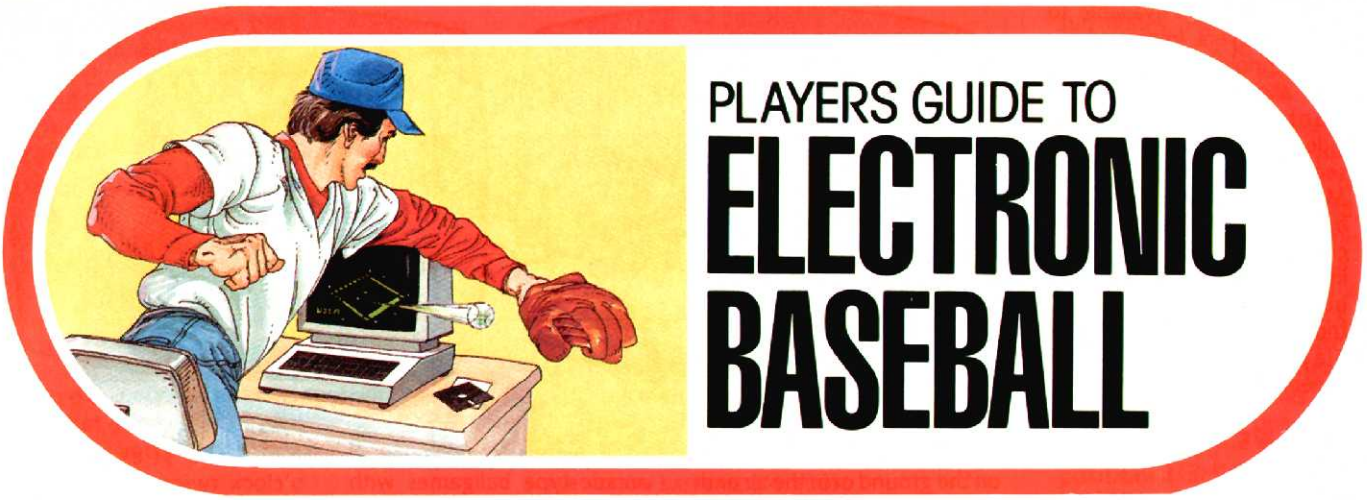


PLAYERS GUIDE TO

ELECTRONIC BASEBALL

VIDEOGAME HARDBALL

BALLS AND BATS: THE EARLY DAYS

In the dawn of electronic gaming, electronic versions of the summer sport came in two varieties: simple and simpler-still. From a contemporary viewpoint — with digitial managers able to select everything from taking a lead to opting for instant replays — electronic baseball remained in a relatively primative state during the first years of the arcade revolution.

While paper gamesters worked on the antecedents of strategic and tactical baseball simulations, electronic mavens crept along with reproductions that owed more to playground recreations, such as "stickball" and "automatic", than the Doubleday-created original.

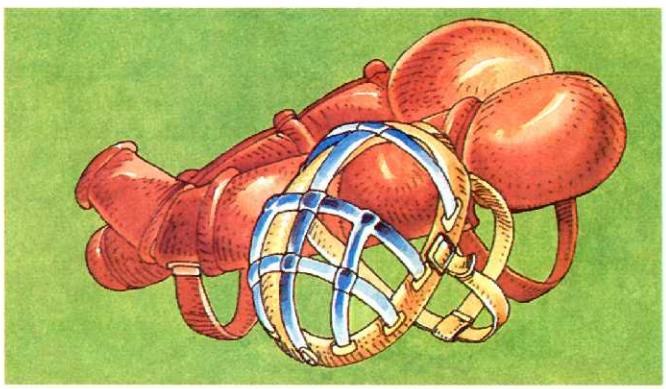
The arcade version of baseball evolved into pitch-and-hit contest. On offense, players manipulated an electronic batsman whose round-house swing could be utilized to varying effects only through timing, i.e., either "pulling" the ball, meeting it dead on or swatting it to the opposite field. Defensively, gamers practiced four-signal pitching — moving the joystick south generated a fastball, north a slowball while lateral manipulation curved the pellet in the appropriate arc. Once the batter made contact, fielding generally consisted of swinging the nearest available player into contact with the ball, using directional signals.

In those simpler times, this seemed like plenty. But as the economics of computer memory made greater and greater degrees of realism available, so the demands of electronic Ruths and Fords also swelled.

FIRST GENERATION HITS AND MISSES

The stoneage days of pitch-and-hit videogame baseball are best represented by the first forays into silicon slugging, **Atari's VCS Baseball** and Odyssey² **Baseball.**

The very first 2600-compatible simulation presented a playfield consisting of a crude scoreboard, four bases, a batter and up to three (count 'em!) defensive players. This version stripped the game down to its naked essentials, as outlined above, but provided the then-titilating option of player-vs.-computer in lieu of head to head competition. Odyssey's version was two-player only, but included such unheard-of touches as full-team play and even an outfield! This level of electronic verisimilitude remained the standard until the advent of the second-generation videogames expanded the action component while computer software simulations gave the game some brains.

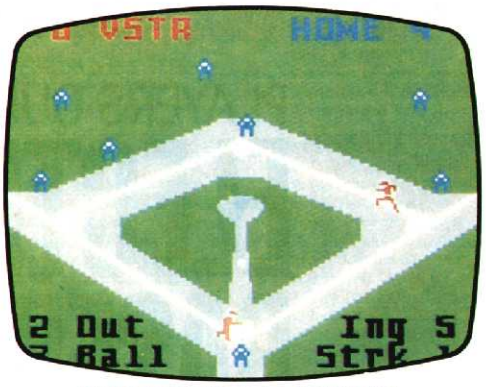


TURNING PRO: SECOND GENERATION ROUNDBALL

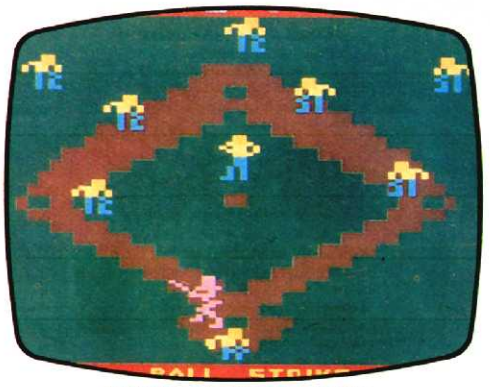
Videogame recreations of the National Pastime hit the second plateau with the introduction of Mattel's Intellivision. Mattel's **Major League Baseball** offered homebound sports fans the first full-bodied arcade-style treatment of the game. Gamers could now take the extra base, steal and even tag-up in addition to gaining access to *all* defensive players. Using the numeric keypad in conjunction with the control-disc, *Major League Baseball* lived up to its name, remaining the state-of-the-art simulation for over two years after its 1981 debut.

In fact, *Major League Baseball's* only drawback was its lack of a one-player option. This flaw, however, owed more to the game's superior quality than any other factor. Memory capacity in the Intellivision was too limited to allow the computer to handle

all the functions available to human players. Improved silicon technology, however, has now allowed Mattel to supplant itself as the sports videogame leader among the second-generation systems. **Major League All Star Baseball,** one of the last programs created by Mattel for its fading Intellivison, offers all the boons of the original cartridge, along with a solitaire play option and slightly speeded-up action.



MAJOR LEAGUE BASEBALL (MATTEL)

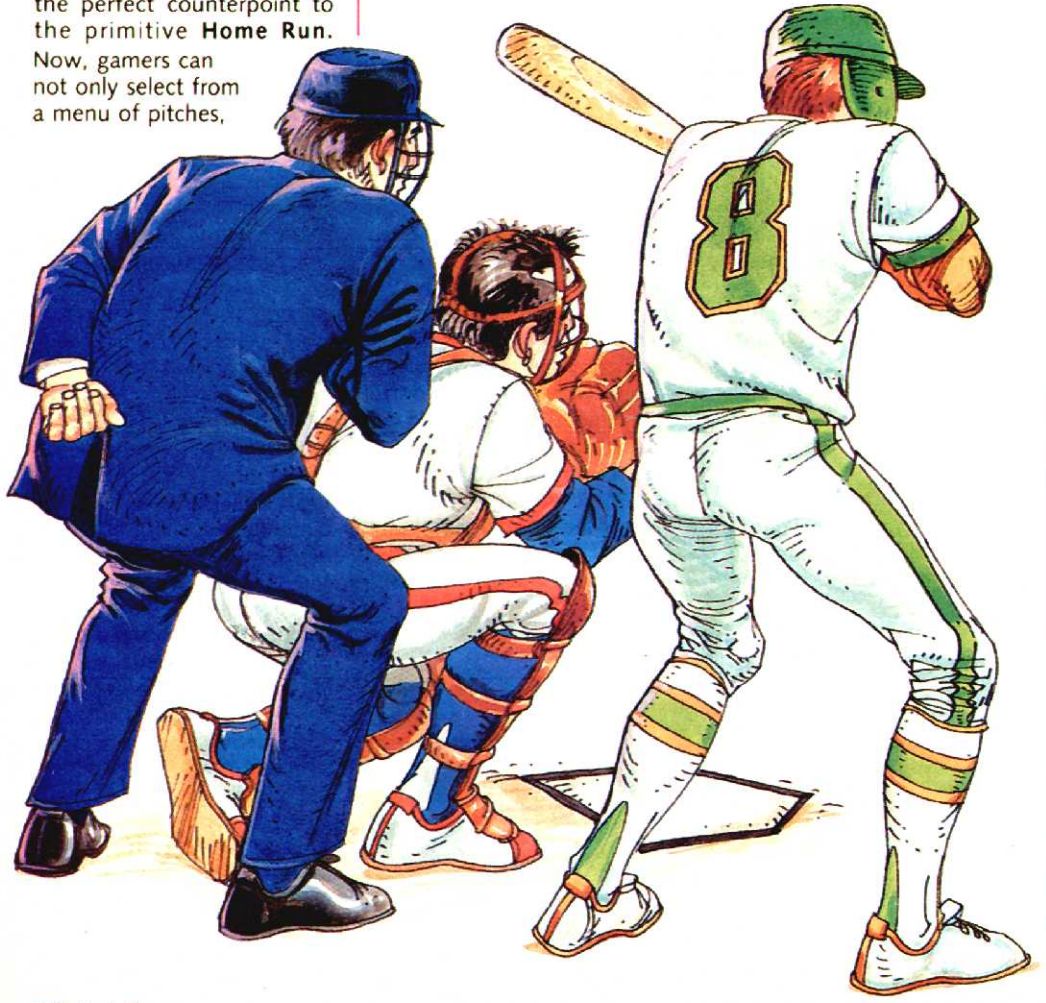

REALSPORTS BASEBALL (ATARI)

THE VCS GETS BACK IN THE GAME

By this time, needless to say, owners of the Atari VCS were restless. While the 2600's software-oriented design was allowing the cartridge makers to push back the limits in adapting popular coin-op titles, sports enthusiasts felt, justifiably, that they were getting the short end of the stickball bat. Atari concurred, and revolutionized the VCS universe with their "RealSports" software line.

RealSports Baseball offers the perfect counterpoint to the primitive **Home Run.** Now, gamers can not only select from a menu of pitches, but can bunt, hit the ball on the ground or in the air and even pick the field to which it would be hit. The only similarity to Atari's original baseball entry is a plus — *RealSports Baseball* is playable in one or two-player formats.

Soon, 2600 sports enthusiasts not only had a high-quality baseball cart, but a real *choice*, because Mattel adapted its groundbreaking Intellivision *Major League Baseball* to VCS play under the M-Network logo. The result, **Super Challenge Baseball** combines the hit-and-pitch emphasis native to all arcade-type ballgames with sophisticated and, at times, somewhat confusing pre-programmed play elements. Arcaders pre-select the velocity of both the pitch and the batter's swing. Control of the on-screen players (the defensive team is *sans*-shortstop) is selected via a difficult-to-remember code. To assign direct joystick control to the first baseman, for example, the human coach moves the shaft to the right. To get the right-fielder on the stick, however, the gamer must move the stick to three o'clock *twice* in succession. Similar action is required to manipulate the second-baseman and center-fielder, and the third-baseman and left-fielder (thus the shortstop would hopelessly complicate things).



BASEBALL IN THE THIRD GENERATION

The growing sophistication of programmable systems has been mirrored in the expanding world of baseball software. New third-wave systems have brought heretofore unimaginable levels of versimilitude to arcade-style sports contents.

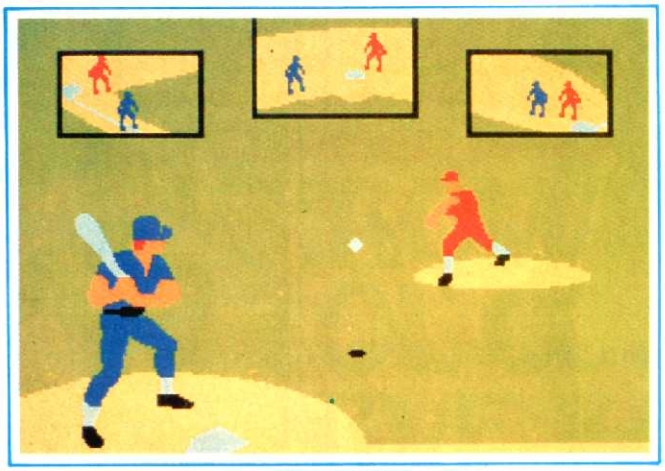
Atari's 5200 version of *RealSports Baseball* is an audio-visual delight. Realistic-looking players jog onto a slightly angled field, complete with shadows, a scoreboard and even bleacher-bums who stand up and cheer at appropriate moments. Human coaches maintain total control over their digitized squad by preselecting pitches while the 5200's CPU "brain" helps things out by automatically assigning control to whichever fielder is closest to the ball in play. At bat, meanwhile, gamers hold onto their electronic pine throughout the entire swing. Players can thereby stick the bat out for a bunt, swing short and go for the grandstands through horizontal joystick control.

In addition, the 5200 version of Mr. Doubleday's game comes complete with complete audio play-by-play. Every play — every *pitch*, for that matter — is called by means of a special voice-chip mounted into the cartridge

casing itself. Does this game have everything? Would you believe, there's even a seventh inning stretch, during which the computer plays "Take Me Out To the Ballgame"!

TV sportscasting has also had a significant impact on ColecoVision's version of the National Pastime. *Super Action* **Baseball** presents armchair Mickey Mantles with not only the traditional slanted overview of the playfield, but also offers an array of more exotic "camera angles."

The most interesting perspective on the play is offered by a look at the action from the first base-side, with simultaneous "window" shots boasting close-ups of first, second and third base.

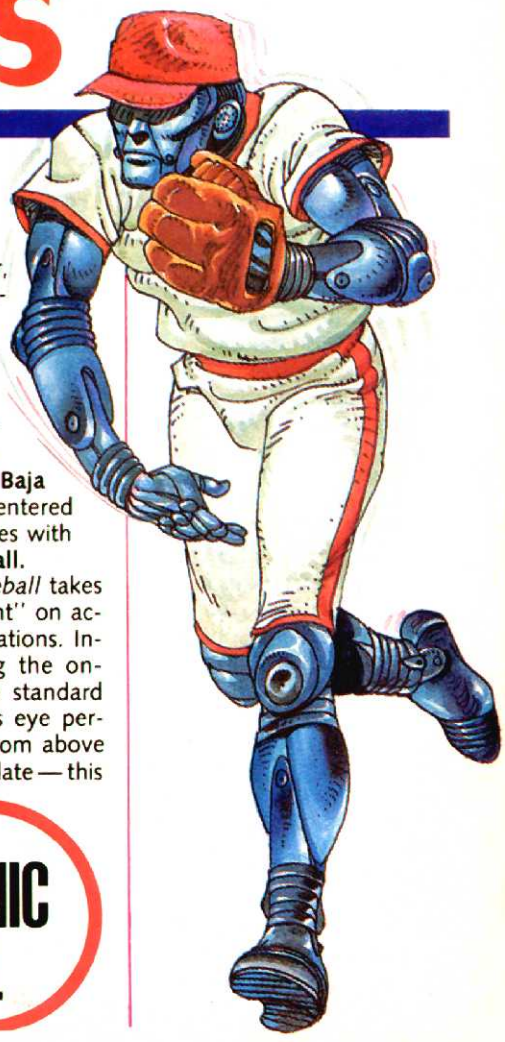


SUPER ACTION BASEBALL (COLECO)

On-screen characters for *Super Action Baseball* are also a drastic change from the familiar, blocklike human surrogates. Players here are fully rendered with all players animated in high-resolution graphic displays.

Coleco's version of baseball is so detailed, in fact, that new controllers are required to play it. In lieu of its standard, joystick-keypad style controller Coleco has packaged *Super Action Baseball* with a pair of grip type, joystick/keypad/speed roller controllers. The most significant addition offered by this new controller are the quartet of color-coded, finger-positioned action buttons. Unfortunately, not every gamer has the flexible fingers to utilize this special command divice to its fullest.

COMPUTER BASEBALL
A WORLD OF STRATEGY & TACTICS



OPENING UP THE GAME

Taking baseball simulations into the high-memory universe of home computers has widened the perspective of the game considerably. While baseball software on a microcomputer stands up well against the very best arcade-type videogames, it can also expand the sport into two other areas not previously discussed.

Arcade-type baseball games offer teams whose only parameters are determined by the skill of the players (or computer), but what if the concept of a "simulation" is taken a step or two farther? It then becomes possible to "coach" a team comprised of actual players, past and present. Suddenly, lead-off hitters can run faster but suffer a diminution of power. Clean-up hitters can take the pill downtown a lot more often and the more strategy-oriented dimensions of the game come into play for the first time.

Finally, transposing the summer game onto computer allows gamers to get into the world of "stat replay" contests. In these games, human coaches run real teams through their paces with the outcome determined through coaching skill, chance and, of course, the statistics.

ACTION ALL THE WAY

For computer gamers who prefer the arcade approach to the game, however, Gamestar, the company who took the sports of football and dune buggy racing into the Atari computer universe with **Starbowl Football** and **Baja Buggies**, has now entered baseball sweepstakes with **Star League Baseball.**

Star League Baseball takes an interesting "slant" on action-baseball simulations. Instead of depicting the on-screen play in the standard fashion — a bird's eye perspective as seen from above and behind home plate — this

ELECTRONIC BASEBALL

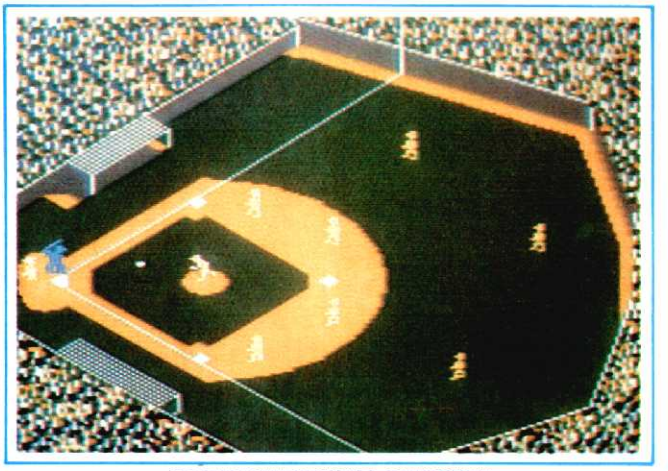
version looks at things from an entirely different point of view.

As the game begins, gamers are treated to a close-up look at the grandstands with a scoreboard and waving flag rising up into a cloud-flecked sky. As the computer organist works out vigorously, players use the "option" key to determine the mode, whether batting practice (always a good idea — especially when going up against the computer's own team of ringers) or an actual game. The "select" key determines one or two-player format and the "start" toggle gets the game in gear.

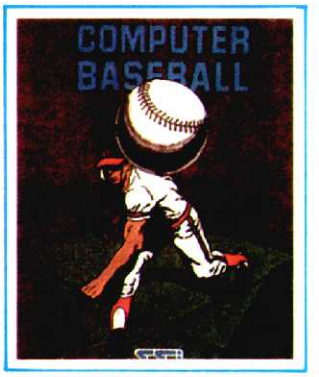
If the gamer wants to play ball, the menu then proffers an intriguing set of alternatives, programmable for both teams. The arcader can opt to play a "curves and liners" type game or a "heat and sluggers" format. The former is the type of game best associated with teams such as the Houston Astros — a heavy dependency on pitching, with an assortment of curves being thrown on defensive while taking a 'pinball' approach to offense. This type of team relies on a low scoring contest with power being sacrificed for a higher on-base percentage. The "heat-slugger" alternative is more of a New York Yankees game. Hurlers throw like Goose Gossage while the batters are constantly swinging for the fences. Playing with the "option" and "select" keys allows gamers to go even further into the strategic end of things. Prefer to throw heat and nickel-and-dime it at the plate? Go for "heat and liners". Does a menu of junkball defense and Dr. Longball offense appeal to you? Then go for "curves and sluggers" and pretend you're Earl Weaver!

This unprecedented level of strategic programmability in an essentially action-oriented baseball simulation makes for a truly fascinating contest. And realism? Once the game scheme has been determined, the computer politely requests that everyone stand while the organ chugs out a brisk "Star Spangled Banner" before play commences!

The playfield here is as new and innovative as the rest of the program, offering arcaders a look at the action as seen from high in the grandstands on the first base side of the stadium. Full-team control is maintained throughout with all batters operating as right-hand hitters.



STAR LEAGUE BASEBALL (GAMESTAR)



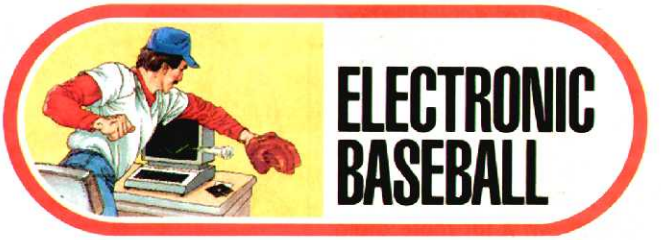
COMPUTER BASEBALL (SSI)

PLAY IT AGAIN, CASEY

Computer Baseball (Strategic Simulations) is still the pennant-winner when it comes to electronic statistical replay games. The standard game includes team rosters for the clubs which competed in 13 of the greatest World Series of all time. Disks which reflect individual players' performances for each of several recent seasons are available from SSI, and there's some third-party publishing in this area as well.

In play, the manager selects a line-up from the team roster displayed on the screen. The gamer must face substantially the same problems a real skipper must solve in creating the best batting order and most effective pitching rotation.

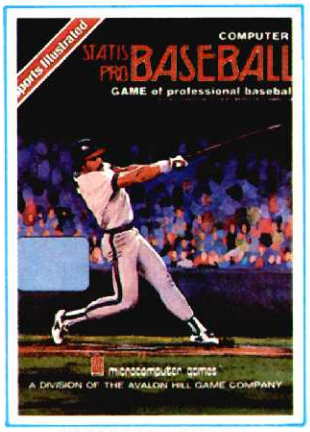
Playing head-to-head against another human manager is probably the most enjoyable way to use *Computer Baseball* but Casey the computer coach provides at least rudimentary opposition for



solo gaming. He's not the brightest pilot around, but he makes the right moves most of the time.

There's plenty to keep managers occupied on both offense and defense. For instance, the reliever warms up in the bullpen before taking the mound in an actual game. This means that you, as manager, must anticipate the need for a fireman and have him heated up and ready at the crucial moment. On the other hand, if you have the pen active all the time, your pitchers may leave their game on the sidelines.

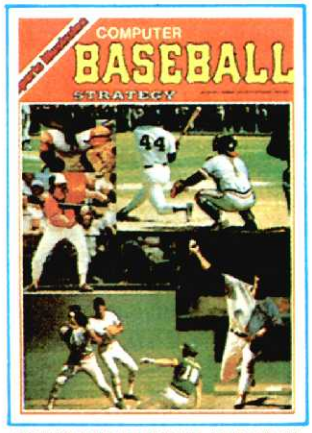
Avalon Hill's **Statis Pro Major League Baseball** is fairly similar to SSI's entry. While its graphics are fairly minimal, the tactic duel between rival managers is very entertaining.



STATIS PRO BASEBALL (AVALON HILL)

The game doesn't have a solitaire mode, but this should present no great obstacle to stat players weaned on non-electronic games like APBA and Strat-O-Matic. It's really very easy to direct both teams.

Coming down the pike from Epyx is **The World's Greatest Baseball Game.** Scheduled to debut on the Commodore 64, this program features both action and stat-replay modes for maximum enjoyment. It's visually equivalent to the best of the arcade titles while giving those who like the simulation side of things the chance to make a full range of managerial moves.



COMPUTER BASEBALL STRATEGY (AVALON HILL)

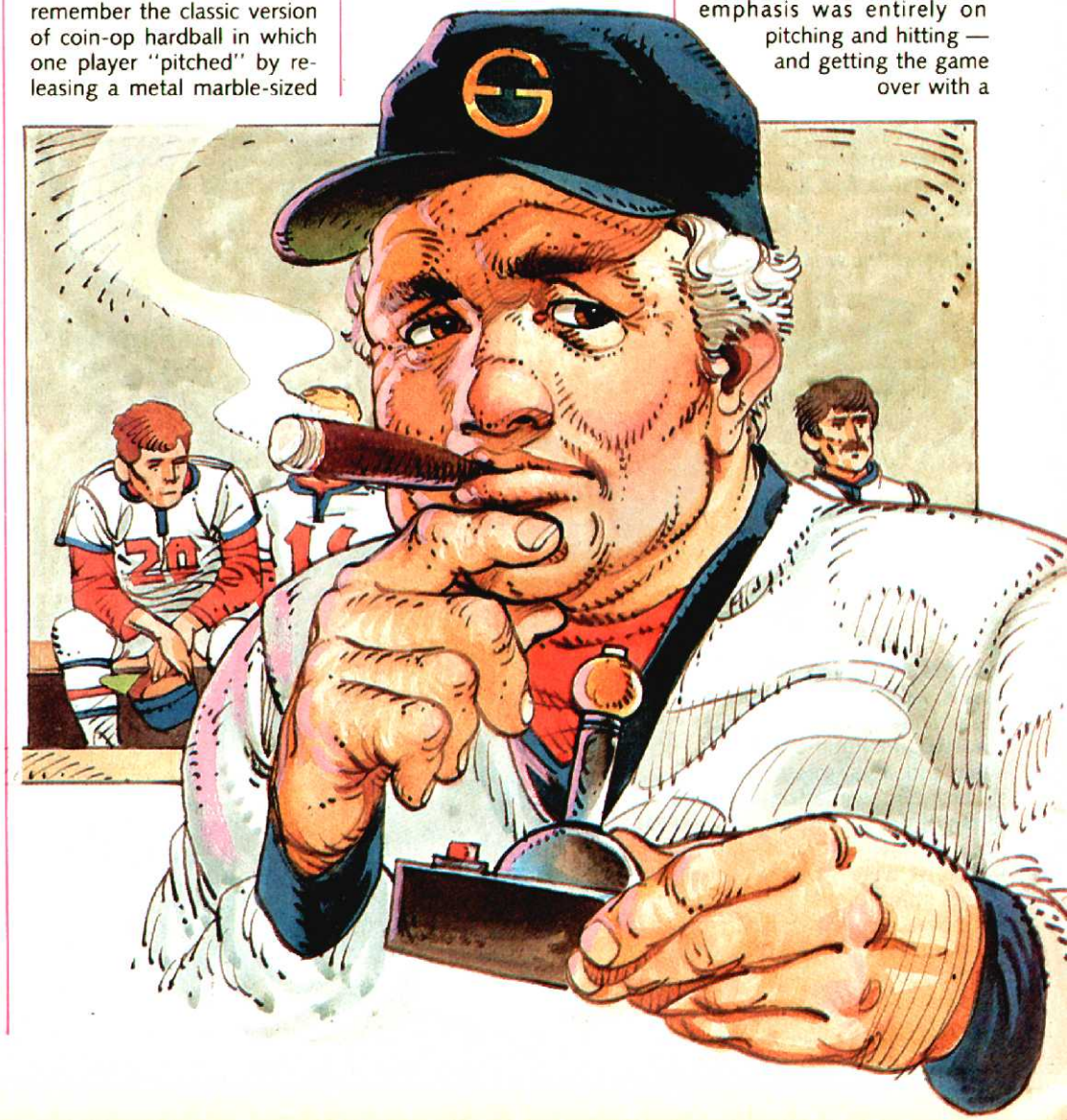
THROWING THE OL' COIN-OP CURVE BALL

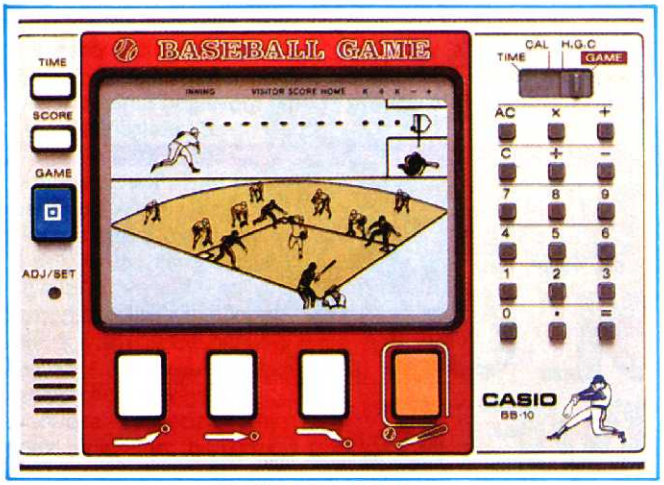
THE OLD BALLGAME

Electronic baseball simulations date back some thirty years, with arcades offering primitive versions of the summer game that more closely resembled pinball than the National Pastime.

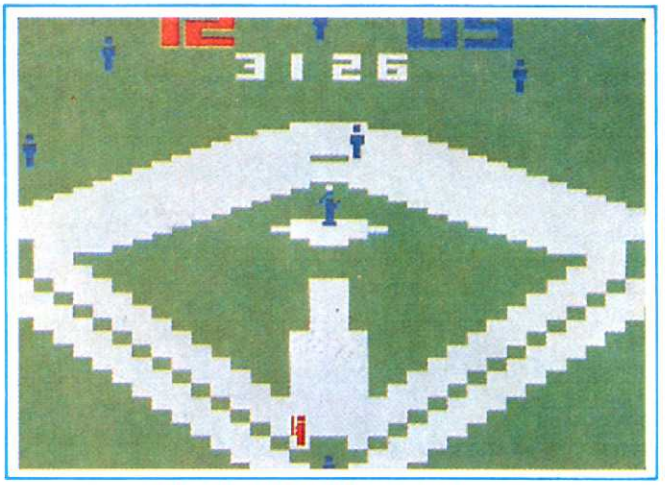
Older arcaders will surely remember the classic version of coin-op hardball in which one player "pitched" by releasing a metal marble-sized ball from a trapdoor-slot located on the "pitcher's mound". The gamer at the plate then triggered a tiny wooden bat operated by spring levers. After a hit, the ball would travel over the game's surface until it struck a "thumper bumper" or similar target labeled to represent a single, double, homer, fly-out or whatever.

With the advent of the videogame revolution, an early form of computer baseball was introduced by Bally Midway. Known generally as **Tornado Baseball,** this was an apty-named warp speed simulation in which the emphasis was entirely on pitching and hitting — and getting the game over with a

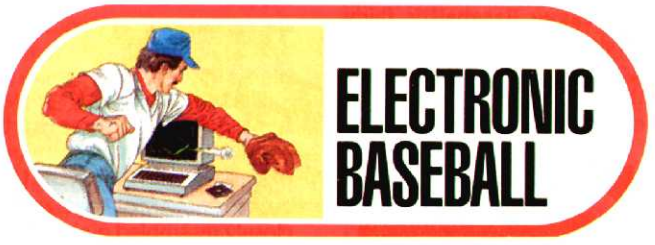




BASEBALL GAME (CASIO)



SUPER CHALLENGE BASEBALL (M NETWORK)



quickly as possible in order for the machine to eat another token.

Once a ball was hit, the computer took over completely, assigning the result in type right on the playfield. The gamer was informed instantaneously as to the result of the swing, with on-screen players frequently forming a conga-line as they hot-footed it around the bases.

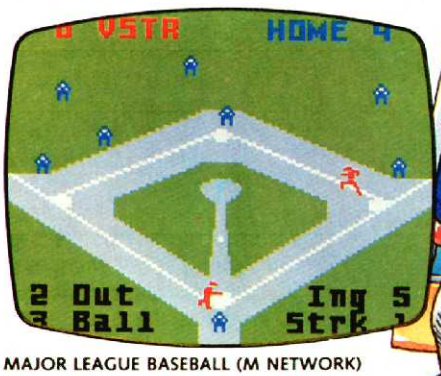
Tornado Baseball even appeared in home format, under the same name, in an early entry for the Bally Home Arcade (since retitled, several times, sold and dubbed the Astrocade).

After *Tornado Baseball*, however, the world of arcade sports simulations in general (and baseball videogames in particular) became a vast wasteland. Coin-op makers far and away prefered the quick-turnover action-arcade games to contests in which even novices and incompetants were guaranteed at least three outs and a minimum number of innings. For almost a decade, no baseball simulation of any significance appeared on the arcade horizons.

TAITO'S CHAMPION

Finally, in late 1983, Sega, the coin-op manufacturer who brought **Frogger** and **Turbo** into gaming palaces, produced the next major state-of-the-art arcade baseball contest.

Dubbed **Champion Baseball**, the Sega coin-op first hit a home run in Japan. In that baseball-whacky nation, where The Bad New Bears remains the top-grossing motion picture of all time (!), *Champion Baseball* was a solid hit, bordering even on "phenomenon" status. Having learned its stuff primarily from programmable videogames, *Champion Baseball* used all the capabilities a coin-op could possess to recreate full-field action.



MAJOR LEAGUE BASEBALL (M NETWORK)

Top-notch graphics and smooth-as-silk play action combined to give this coin-op all the heat any videogame could ask for. How successful was it? Successful enough to warrant a shot at the arcade big leagues — aka, the U.S.A. Representing the first major sports coin-op to be introduced in America since Atari's early tracball-oriented **Football**, *Champion Baseball* confounded the experts not so much because of its quality, but by its economic attainments. That is, it made money. At a point when coin-ops were slumping badly and manufacturers were rethinking the entire concept of how-much-play-per-token?, *Champion Baseball* registered as a surprising hit, proving that a coin-op could win big at the arcades even without a three-lives-and-you're-out format.

The future of electronic baseball is full of possibilities. Stat replay games may actually run laserdisk or hi-res animation of each play's resolution. Elements such as trades and draft choices may be incorporated.

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John O'Neill: The Dali of Computer Gaming

By TRACIE FORMAN

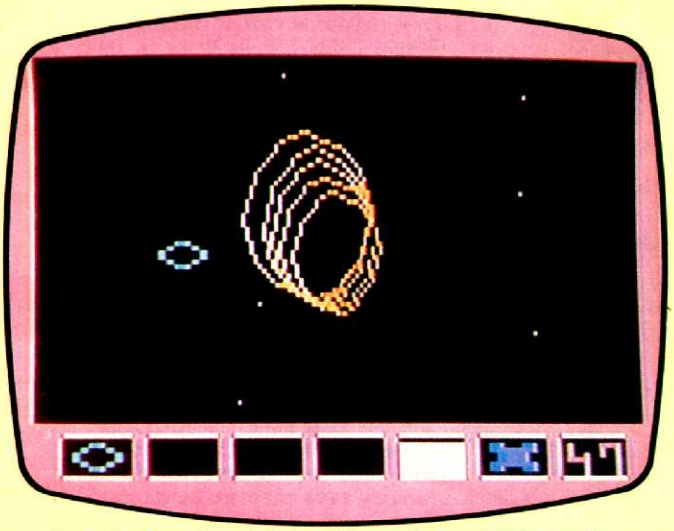
"If Leonardo da Vinci was alive today," says artist John O'Neill, designer of Roklan's **Lifespan, "Electronic Games** would be reviewing his work." The soft-spoken, sophisticated Englishman must know what he's talking about, having spent most of his life honing his skills as an artist — first as a painter at Bath Academy, where he received an honors degree, then at London's Chelsea School of Art.

"I used to exhibit as an artist," he explains, "but art and people got separated. Art got very esoteric, and most people were alienated by it." Disillusioned with what he perceived as a wall between the art "establishment" and average people, O'Neill began exploring a variety of experimental art forms, all the while lecturing to keep creditors away.

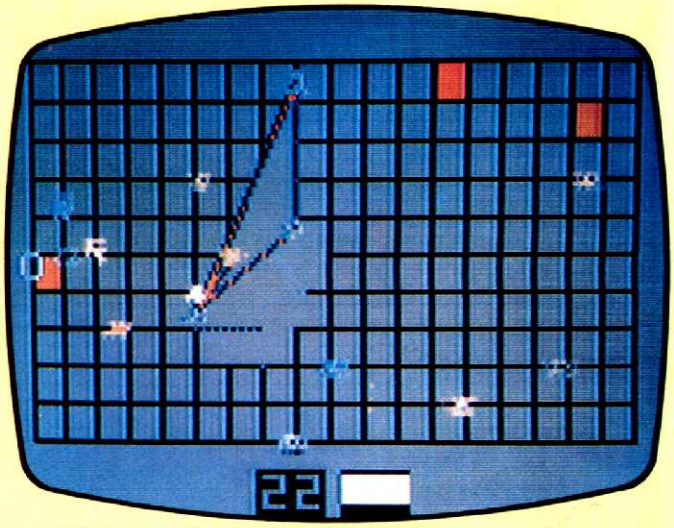
His search for a way to give art usefulness in people's lives led to the formation of his first company, Admacadiam. The word is a half-Latin, half-English phrase he coined, meaning "something that gets you involved with it, then takes you on to something else." The fledgling company designed postcards, playing cards, and games-as-art. During Admacadiam's seven-year life, O'Neill "learned to take criticism as a guideline instead of an insult." Admacadiam also inadvertently led to O'Neill's involvement in the computer industry.

It was in California, while lecturing on Admacadiam, that O'Neill first met up with David Thornberg, who introduced him to the ultimate canvas — the computer. His imagination caught fire, and it didn't take much prodding from Thornberg for John O'Neill to pick up stakes, move to California, and begin a new company named Flyghts of Fancie.

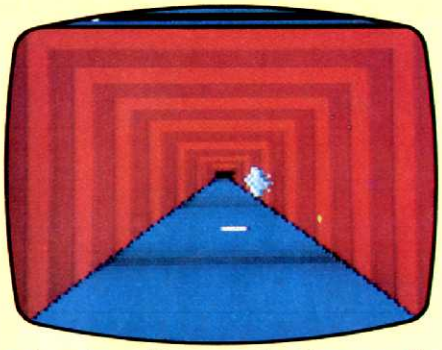
"Artists should work in the medium of their times," he says. "Videogames have so much potential for stimulation, more so than paintings! The games come at you through at least



Opportunities abound during *Lifespan's* opportunity corridor



"Situations & Conversations"' Developing common interests



Lifespan's **experience corridor: Hope prevails**

three different art forms at the same time: visual, audio, and literary. With a videogame, you can take someone on an all-consuming trip."

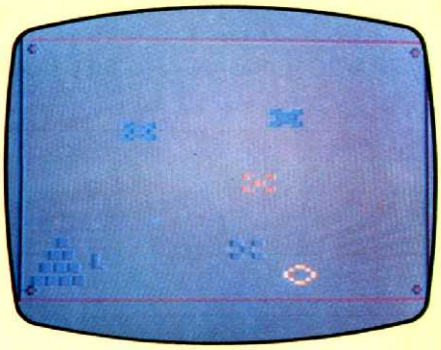
Lifespan, which O'Neill designed, made even the most jaded software critics sit up and take notice. The game's play mechanic was designed order to make people examine their own lives — developing personality traits from earliest childhood, trying to find common interests with their peers, grasping opportunities, and taking the hard knocks of anxiety and doubt — and the uplift of hope — in the experience corridor.

But *Lifespan* is just the beginning for O'Neill's Flyghts of Fancie, which independently develops games for software manufacturers. "Every game we put out will push the (videogame) barrier back a little further," he promises.

The company's second effort, also from Roklan, is called **M.O.R.L.** (it stands for Middle of the Road Lizard) and involves "looking inside the brain of a being." Also due soon is **Day** (released by Reston Software), about a day in a person's life. *Day's* action progresses from dreams to aspirations to actions to memories, and then reverts back to dreams again. Reston will also release Flyghts of Fancie's **The Dolphin's Pearl**, a game about interspecies communication.

The unusual subjects O'Neill favors reflect his own disdain for typical kill-and-eat games. Though he enjoys a good game of **Tempest,** O'Neill prefers games with content, particularly those that are analogies of life.

He's currently collaborating with cartoonist Gahan Wilson on **Gahan Wilson's House of Horrors,** a title already snapped up by Electronic Arts.

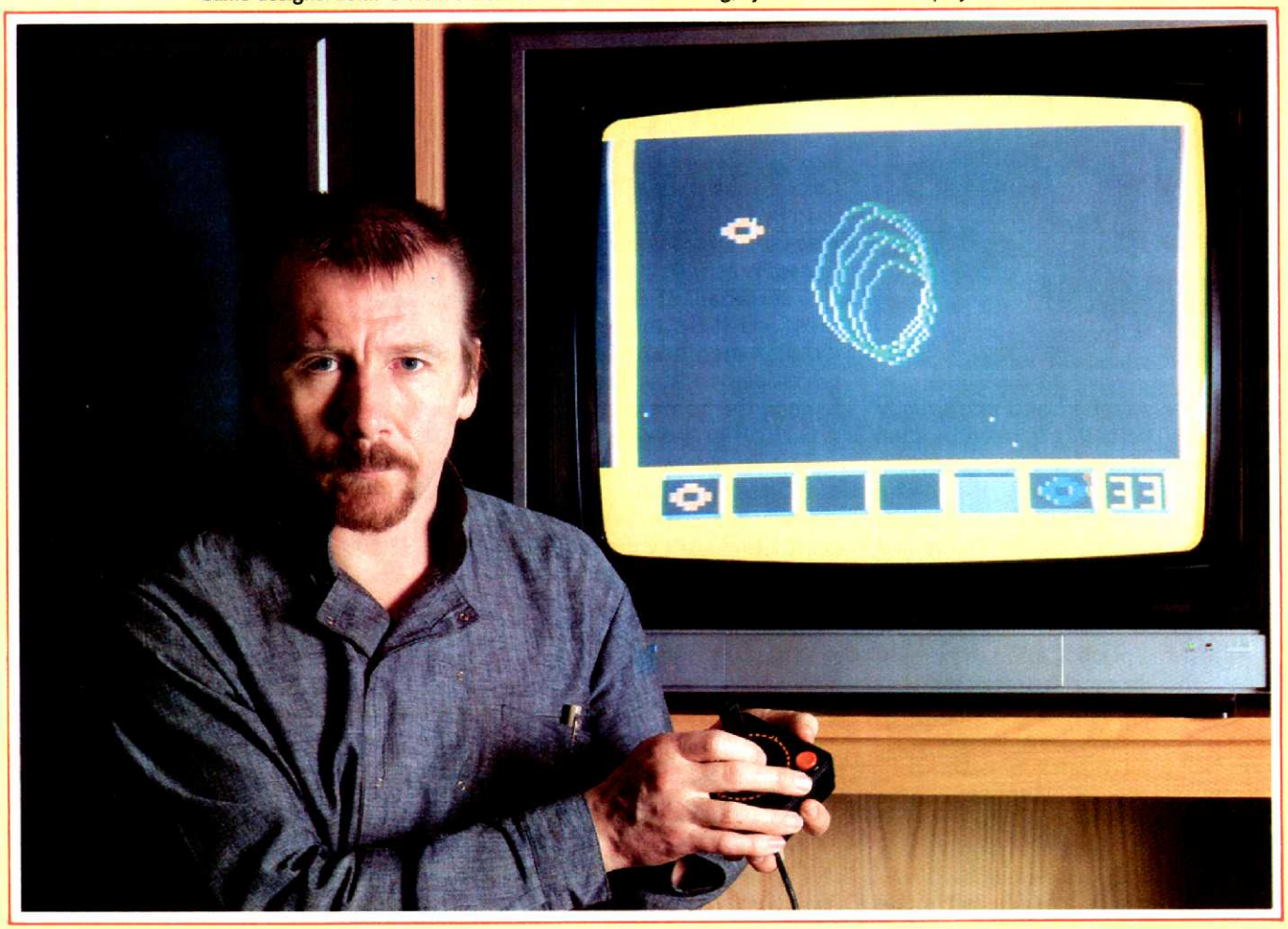


Developing a personality in "Childhood"

With a series of download computer games on the way for Time-Life's cable-videogame system, as well as plans to make the most of the new laserdisk technology, the artist is finally realizing his dream of making art accessible to the masses.

"The potential impact on people's lives is astounding," he says with a definite gleam in his eye. "The industrial revolution led to the development of the natural resources around us. But the computer revolution is leading to a new development. . .of the natural resources *within* us."

Game designer John O'Neill's work is known for its striking, symbolic visuals and play mechanics.



By TRACIE FORMAN AND BILL KUNKEL

IN CONTROL

ATARI 5200 TRACKBALL CONTROLLER

Atari/5200-compatible

Trackball controllers are the great luxury item of the electronic gaming universe. Very few games actually play better with trackballs, they're quite expensive to purchase, and the good units are the exception rather than the rule.

Atari's trackball for its 5200 is certainly as well made as any home controller on the market. The ball itself is a duplicate of Atari's coin-op trackball — the best controller of its type — and its casing, though lightweight plastic,

is beautifully crafted and intelligently designed. The ball is flanked by dual sets of keypads and two pairs of action buttons. In the center, above the trackball, is a single set of start, pause, and reset buttons. The controller can be used comfortably either when resting on the floor or held in the gamer's lap.

At first the plastic casing may seem quite light, giving this trackball a different feel from its coin-op cousin (which, of course, is imbedded in almost half a ton of arcade machinery). Players will quickly compensate for this difference, though. After a round or two of **Centipede**, most gamers will find themselves completely smitten.

The downside comes with the miniscule amount of game software available for use with the trackball. As of this writing, only two of the 25 or so games available for the 5200 can *use* the trackball! While **Missile Command** and *Centipede* are, indeed, greatly enhanced by the use of this controller, it just isn't enough. Even those games which could conceivably use a trackball in lieu of a joystick controller (**Soccer**, **Vanguard**, Parker's **Super Cobra,** etc.) have not been programmed to accept it.

So here's what it boils down to: Just how much do you want a trackball? Knowing how limited its uses are — *caveat emptor* and all that. Again, this is a real luxury number, but as with most such items, it's also a blast!

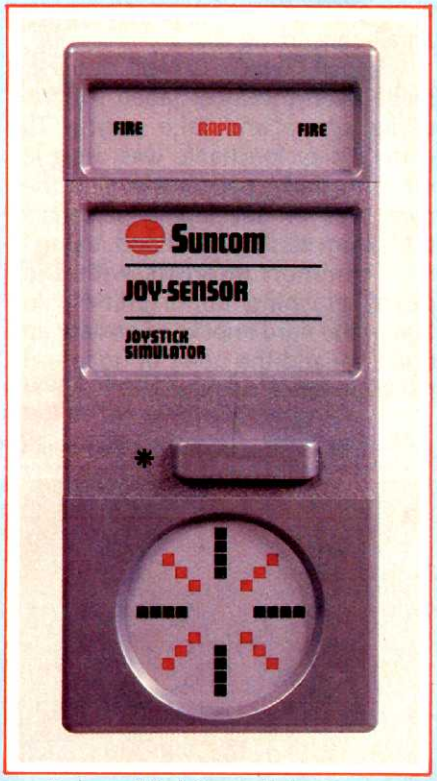
JOY SENSOR

Suncom/Atari or ColecoVision-compatible

In spite of its Intellivision direction disc-like appearance, Suncom's **Joy Sensor** is actually better described as a flat trackball. It has no buttons to press, no sticks to grip — just a flat, circular membrane at the bottom, which responds to the lightest touch to send the home arcader's on-screen object off in the direction pressed.

This is *not* an all-around replacement joystick, although it works with virtually any game. While most players would probably prefer a "real" joystick for many stick-oriented games (like **Donkey Kong**, **Pac-Man**, etc.), the *Joy Sensor* really comes into its own in more free-wheeling programs.

When used as a trackball substitute, the *Joy Sensor* lets players whiz back and forth across the screen faster than possible with *any* joystick. I actually doubled my usual score on **Missile Command** and did almost as well blasting bugs in **Centipede**, all accomplished with just the touch of one thumbnail.



Early model of Suncom's Joy-Sensor

The top of the *Joy Sensor* features two firing options, normal and rapid. Either option responds to a light touch, and it definitely saves wear and tear on the ol' trigger finger.

The *Joy Sensor* is currently available in two different versions. The VCS model is sleek, shiny silver, accented in red and black, while the Colecovision version comes in basic black and features a full-function Coleco keypad built in. Both are unusual — and plenty of fun.

THE FLIGHT COMMANDER CONTROL AND THE COSMIC COMMANDER CONTROL

MB Electronics/VCS-compatible

The current joystick glut is making

Get Into the Cockpit With the Flight Commander Control

Revamped Joy-Sensor for Atarians

Colecovision Joy-Sensor features full keypad

gourmet controller manufacturers really scramble to find a place on retail store shelves. Some companies, like Suncom, Amiga and Coleco, responded by pioneering the trend towards highly specialized controller/videogame combination packages.

MB Electronics makes its debut in home videogame controllers with two battery-operated, VCS-compatible specialty items: **The Flight Commander** and **The Cosmic Commander** controls. Both come with their own cartridge games and have the distinction of being the first "sticks" to offer real physical feedback, sound effects, and small light-up details that respond to each press of the action button.

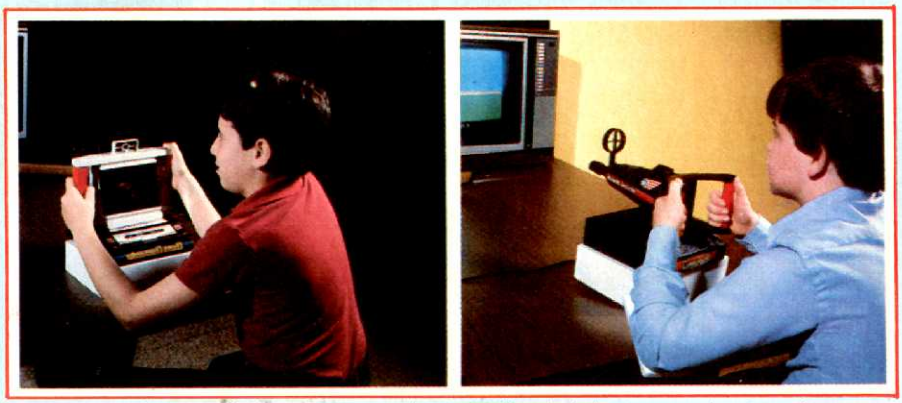
To be honest, both the grinding "whirr" and the vibration of the controllers are reminiscent of a souped-up electric toothbrush, but with their challenging, fast-action games, their unique good looks, and their basic toy appeal, these controllers are sure to appeal to the kiddie market.

The Flight Commander Control is a reasonable facsimile of a World War II flying ace's trusty black machine gun. It comes with its own decorative stickers and a very nice-looking air battle game, **Spitfire Attack**, which shows the *Flight Commander* off to its best advantage.

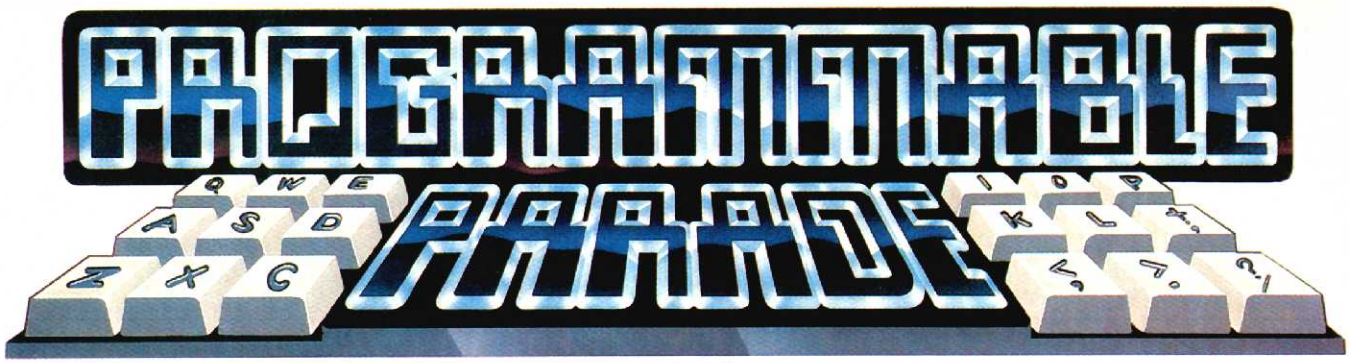
The Cosmic Commander Control has a truly high-tech look well-suited to its fast-action, science-fiction-themed maze shoot-out cartridge, **Survival Run**. The enclosed game is challenging enough to have sold very well on its own, but packaged with the *Cosmic Commander*, it becomes double trouble.

Neither of these controllers are suited to play *every* game (meaning that they shouldn't be bought as replacement sticks), but both are particularly good for breathing new life into first-person shooting games like **Starmaster, Star Raiders,** etc. I also enjoyed a session of Activision's **Space Shuttle** when playing the game with the *Cosmic Commander*.

While older home arcaders might have little use for either of these controllers on a long-term basis, both controllers are highly recommended for the younger set. . .and the young at heart.



MB Electronics' Cosmic Commander Control and Flight Commander Control



Explore the Ruins of a Lost Inca City With Pitfall Harry in Pitfall II: Lost Caverns!

PITFALL II: LOST CAVERNS

Activision/2600

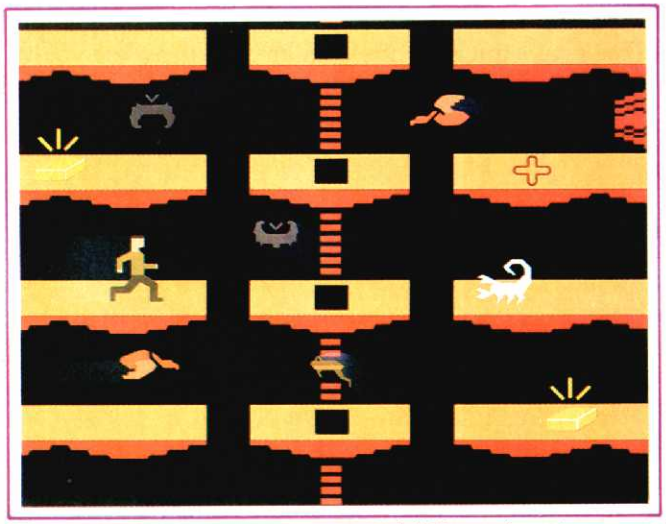
If sequels have generally gotten bad notices in other media, the electronic gaming universe has had much better luck with follow-ups. With the continual enhancement of game memory, videogame sequels have generally expounded upon and given greater graphic and audio scope than the originals. **Ms. Pac-Man** had all the elements of the original and an added bonus of extra wraparound tunnels and playfield mazes. **Donkey Kong Jr.** offered greater challenges to gamers, and numerous revamps and updates of home-grown computer contests have generally proffered something new and prettier than what went before.

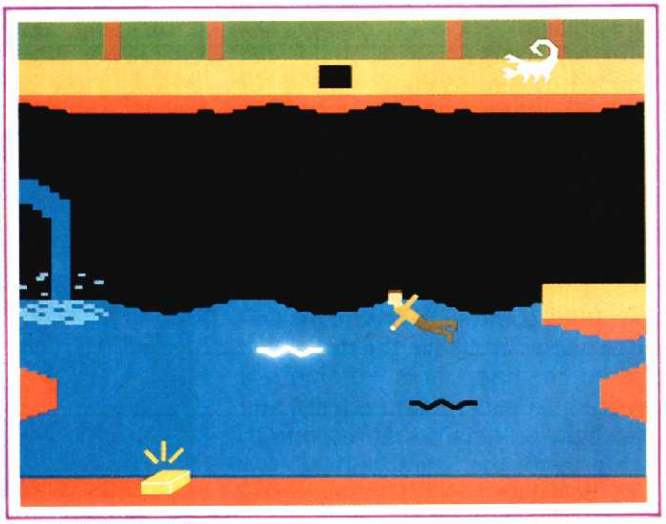
Pitfall II: Lost Caverns, by Dave Crane, designer of the original jungle adventure classic, attains the distinction of being a major technological overhaul of the original's somewhat repetitive play mechanic. No longer does Pitfall Harry simply run, jump and swing, Tarzan-style, from overhanging vines. The intrepid soldier of fortune now roams a forgotten Inca city in the heart of Peru in search of the purloined Raj Diamond. Accompanied by his Saturday morning cartoon-spawned cohorts, Quickclaw, the anixety-stricken mountain lion, and his fearless niece Rhonda, Pitfall must run, jump, swim, fly lighter-than-air balloons and face a seemingly endless series of perilous interlopers.

Pitfall II offers the most remarkable breadth of any 2600 videogame yet produced. Lurching, leaping and gliding over a game matrix comprised of an incredible 8 screens wide and *28* screens deep, and boasting four-piece musical accompaniment (three-part harmonics plus percussion) this is the kind of videogame that would be impressive if presented for a 48K computer. On the VCS, it's simply beyond belief. Many of the wonders here were made possible via a proprietary development courtesy of the Activision design staff. Grafted onto the software, this new chip balloons both the memory capacity of the 2600 and the game's retail price, an unusually high $34.95. Is it worth the price? Absolutely. *Pitfall II* is a must-have item for all 2600 owners. It revitalizes the capabilities of a machine that many observers within the industry, this writer included, thought had reached the end of its silicon rope.

Pitfall II also participates in the current vogue that dictates against violence. Without a constraining time limit, gamers explore the many corridors and caverns of the lost metropolis until the diamond, Rhonda, Quickclaw and Harry are reunited. There are no deaths. Once Pitfall stumbles into a situation that can't be overcome, he is instantly transported back to the last aid station reached before the . . . pitfall!

Pitfall II is *not* a movie-style sequel, regurgitating a play mechanic with slightly spruced up graphics. Rather, it is a major breakthrough in terms of





Pitfall Harry returns in a new adventure: *Pitfall II Lost Caverns.*

MANDO

PROGRAMMABLE PARADE

concept, style, playability *and* 2600 technology.

Harry is back and, incredibly enough, nobody greased his grapevine.

(Bill Kunkel)

B.C.'S QUEST FOR TIRES

Sierra On-Line/Colecovision

The caveman cut-ups from Johnny Hart's famous "B.C." comic strip are the stars of **B.C.'s Quest For Tires**, a high-resolution scrolling rescue adventure that takes the jump-and-duck play-mechanic from **Smurf: Rescue** a giant step forward with the introduction of player-controlled speed variations.

Thor, part-time inventor and self-proclaimed ladies' man, has taken to his wheel in an effort to free the cute chick from the clutches of a hungry dinosaur. To reach his lady love, he must travel through twelve screens of wilderness, jumping over rocks and pits, and avoiding low-hanging branches and chunks of molten lava. Along the way, there are two rivers to ford, the fat broad's club to avoid, and a chasm that can only be crossed with the help of a passing dooky bird.

But the real fun starts when gamers push the right-hand controller button. It speeds up the caveman, making each successful jump worth double, quadruple, or even eight times the original point value (the left button puts Thor's brakes on). Of course, objects are harder to avoid when one is tearing down the road at 70 mph!

B.C.'s Quest For Tires offers much more real action appeal than many games of this genre. The characters are nicely rendered in colorful detail, and while the cartridge is a little sparse with sound effects, the animation is top-quality — especially when Thor wipes out on a rock or branch!

(Tracie Forman)

Thor makes his way to the Cute Chick in *B.C.'s Quest for Tires.*

THE DREADNAUGHT FACTOR

Activision/Intellivision I & II

Just when you thought it was safe to put the Intellivision in the closet — here comes the belated software explosion!

The Dreadnaught Factor is one of several excellent one-player science fiction titles now available from Activision. Players command a tiny "hyperfighter" which must take on an armada of over 100 alien megacraft, the Dreadnaughts (10,000 times heavier and 100 times larger than the player's ship). The hyperfighter can launch missiles and drop bombs to halt the progress of these monster battlestars before they breach the stargate and obliterate the gamer's home planet, Terra.

SF videogames, perhaps more than any other genre of electronic contest, are heavily dependent upon an epic-scale storyline. Sound and fury — and, most significantly, scope — are what give these games their weight. *The Dreadnaught Factor* rovides plenty of all three, blending strategy and tactics with expert skill to provide lots of play value.

The only glitch in this otherwise fine contest is a visual one — in order to distinguish the variety of hatches and gun batteries bristling over the surface of the green and brown Dreadnaughts, it was decided that the weaponry be colored in extremely garish fashion. Livid pinks, purples and yellows create a somewhat eye-blurring color-riot effect. While it would have taken a great deal of work to delineate the surface in the appropriate metallic hues, the effect would have been well worth the effort.

(Bill Kunkel)

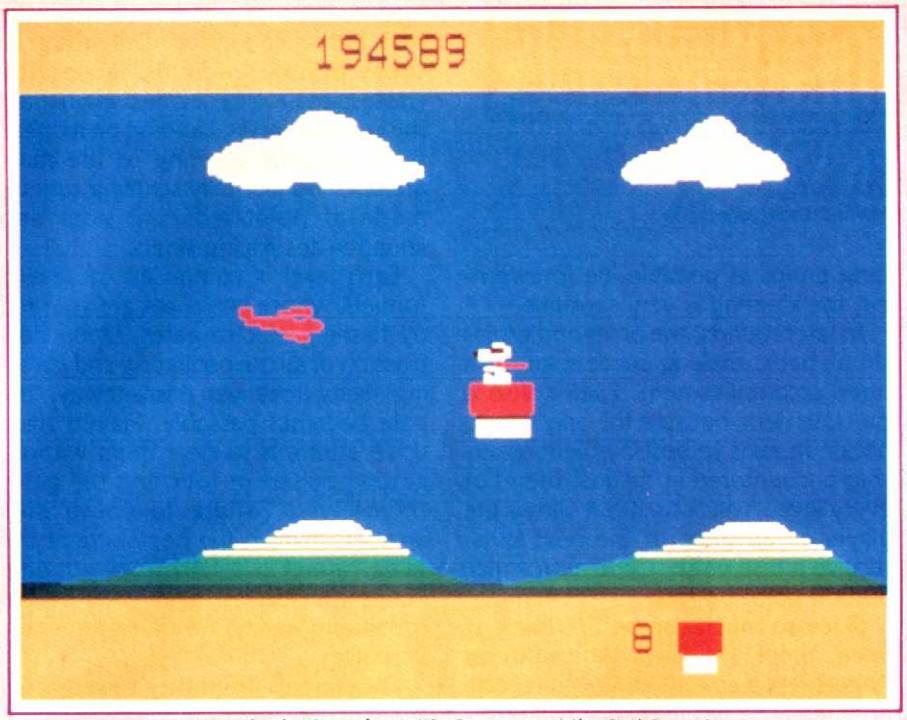
SNOOPY AND THE RED BARON

Atari/2600

The Red Baron is up to his nefarious tricks again, making off with the Alliance's crucial supply of root beer, popcorn, pizza, and more—He's even snagged Snoopy's favorite supper dish! But the World War I Flying Ace isn't about to let his archenemy get away with the goods, so he climbs aboard his trusty Sopwith Camel and takes to the skies in a high-flying air battle/recovery mission. Can he shoot down the Red Baron and catch the treats before they splatter on the ground? Or will he end up shaking his fist in the air and shouting, "Curse you, Red Baron!" as the enemy flies out of sight?

The object of this game, designed for kids between the ages of seven and twelve, is a simple one: Shoot each red plane down and catch the falling treats mid-air, without being on the receiving end of a hail of machine-gun fire.

It takes eight successful shots to down each Red Baron in the attack wave. Likewise, Snoopy's Sopwith



It's a bird, it's a plane, it's *Snoopy and the Red Baron!*

Camel can fly even when riddle with bullets—but the eighth shot brings it crashing down. At the end of each attack wave, the player has the option of re-starting immediately or taking a breather.

The graphics are good, with our World War I Flying Ace depicted in realistic detail, though background scenery is sketchy. Sound effects during play are limited to bullet blasts and the grinding of planes' engines, but short tunes signal the end of each attack wave and the start of a new one.

As far as play-action goes, **Snoopy and the Red Baron** is good but not great. The dogfighting can be intense, but there isn't enough real challenge after the gamer catches on to a few tricks, like staying behind the enemy and shooting from relative safety. Since this is one-scenario game, there isn't a lot to look forward to after each wave, and the player doesn't have the incentive to play again.

Unfortunately, this solo flight doesn't soar. It just sort of cruises along.

(Tracie Forman)

WORM WHOMPER

Activision by Tom Loughry/Intellivision

Tom Loughry's **Worm Whomper** is the sort of high-speed action-arcade game they said could never be programmed on the highly eccentric Intellivision. It's whimsically conceived, visually adorable and a genuine delight to play.

The left of the playfield is filled with two rows of golden corn, and before them stands the field's protector, Felton Pinkerton. Unfortunately, Felton had been goofing off at the County Fair a day earlier and upon his return discovered that the inchworms, banana slugs, snails, giant purple moths and great horned caterpillars had all gotten a good head start on his crops. The ravenous buggers travel from east to west and Felton, equipped with his insect spray and a number of mortar shell-like plough balls, must stay their inexorable advance.

Worm Whomper is a surprisingly charming videogame offering easy play action (I kid thee not) and wonderfully delineated graphics. If you've got an Intellivision you should have *Worm Whomper*. So grab that game controller and start exterminating!

(Bill Kunkel)

CONGO BONGO

Sega/Atari 2600

Some games just shouldn't be adapted for the VCS, and Sega's **Congo Bongo** definitely heads the list. The original coin-op's main charm lay in its outstandingly lush, high-res graphics and 3-D perspective, set off by a rhythmically beating sound track and a cutesy plot line.

In its VCS form, four screens have been shrunk to two. That in itself is not unusual — after all, everyone knows the memory limitations of the 2600. But every element of the game has been curtailed so drastically as to leave nothing left of the game but empty trappings.

The first screen requires the gamer — in the guise of an angry jungle explorer — to wind his way back and forth along stone steps cut into a cliff-side, dodging coconuts hurled by the cowardly ape above. Smaller simians lurk near the top of the mountain, ready to jump the man. If he doesn't shake them off (by jumping) they toss him off the cliff and into the river.

The second screen puts the explorer at one end of a wide river, with Bongo at the far bank. To reach his quarry, the explorer has to jump back and forth across the backs of hippos and fish, which are the only way across the water.

This is a most disappointing release for the 2600, though it's hard to fault the programmers. Trying to squeeze too much into too little has resulted in annoyances like the fact that, on the first screen, it's almost impossible to gauge the actual locations of the falling objects. There are times I could have sworn that my explorer had been beaned, only to find him still standing — and other times when he looked to be a safe distance away from the missile that did him in.

This cartridge is sure to have a certain appeal to hard-core cartridge collectors, as well as fans of the original arcade version. But let all other buyers beware.

(Tracie Forman)

CENTIPEDE

Atarisoft/Colecovision

The ultimate bug-out is among Atari's first releases for Colecovision owners, and **Centipede** is sure not going to disappoint fans of the arcade action game in either graphics or play-action — though it *does* seem a tad harder than its coin-op cousin, even at the easiest of three skill levels. Still, since home gamers tend to play longer and more often than arcade buffs, this is actually a plus because of its continual challenge. After all, who wants a game that can be mastered — and forgotten — within a month or two?

One or two players can take control of a bug-blaster that moves freely about the bottom of the screen. The weapon shoots up at centipede sections and mushrooms that appear when a section is destroyed. The flea,

PROGRAMMABLE PARADE

spider, and dragonfly are all present and accounted for as well, as is the bonus awarded for each partly-smashed mushroom. Graphics are a little blockier than in some other versions, but chalk that up to the Colecovision's graphics sprite system, not to any programming flaws.

Centipede will make your palms sweat, your trigger finger twitch, and your hand reach for the reset switch for "just one more game." Colecovision owners, this one was worth the wait!

(Tracie Forman)

BUCK ROGERS

Sega/Atari 5200

My heart was racing, the blood was pounding in my temples, and I was short of breath. No, I wasn't on the lam — just playing a fast and furious round of Sega's **Buck Rogers**. Make no mistake about it, this 5200 cart was built for speed, with a frenzy of action thrown in for good measure.

The numerous colors used are vibrant and alive, the craft's details are superb, and the explosive sounds are nothing but overwhelming. Without a doubt, this demonstrates the best use of white noise I've ever heard. The explosions are awesome, and the move to the next round is eyepopping, to say the least.

Using the stick to navigate, the pilot must avoid the electron poles while destroying as many saucers and hopping droids as possible. Be forewarned, the steering is very sensitive.

In later rounds, the poles and droids shoot back, making success an even rarer accomplishment. Fuel is also a precious item, because the only way to obtain more is to destroy the mothership encountered in the last round of every level. Knocking it out allows the player to advance to the next level, receive a reserve ship, and earn a nice 20,000 point bonus.

Since so much can be occurring at once, there are times when novice Rogers replacements can become disoriented. The fighter can travel faster than even a sharp eye can follow, so it's best to keep the pedal off the metal. This doesn't mean moving like molasses in January, but, because the slower gamers go, the more fuel is used up. Welcome to Catch 22!

Gamers that enjoy a good outer space shoot-out will find this an excellent addition to their 5200 library. It has explosive impact and packs quite a challenge.

(Ted Salamone)

SUBTERRANEA

Imagic/Atari 2600

Your mission, should you decide to accept it, is to pilot your Cave Ranger chopper through the dark and dangerous depths of **Subterranea** to battle the evil Hexuplex and retrieve as many Treasure Crystals as possible.

This two-screen cart pits gamers against the Hex's aerial robots in the first battle sequence. Defeating all these nimble enemies causes the Grotesque One to flee, leaving behind the coveted jewel. Landing on it opens a vertical shaft leading to the main arena — horizontally scrolling tunnels made of point-reducing sides and chopper-destroying skulls.

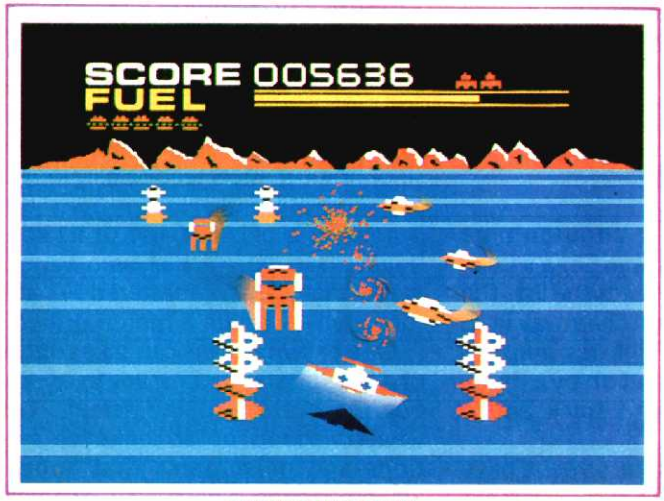
Each level is composed of several tunnels, whose entrances are guarded by flashing electro-gates. Upon destruction of all the oscillating and gyrating flying foes per passageway, the gate becomes passable. Players have three attempts to clear them without getting pulsed or touching the gates themselves. Failure to do so puts arcaders back at the beginning of the same tunnel in a non-scoring mode. Points are lost as time goes by, so speed and agility are of extreme importance.

The tunnels are rather spacious, so they don't offer any navigational headaches. The fun begins with the patterns of the different foes encountered as gamers pilot deeper and deeper. The size of the electro-gates also makes for tight headroom. When the enemy starts to shoot back, there isn't much room to react — never mind time — so the best way to defeat them is to follow behind until they are destroyed.

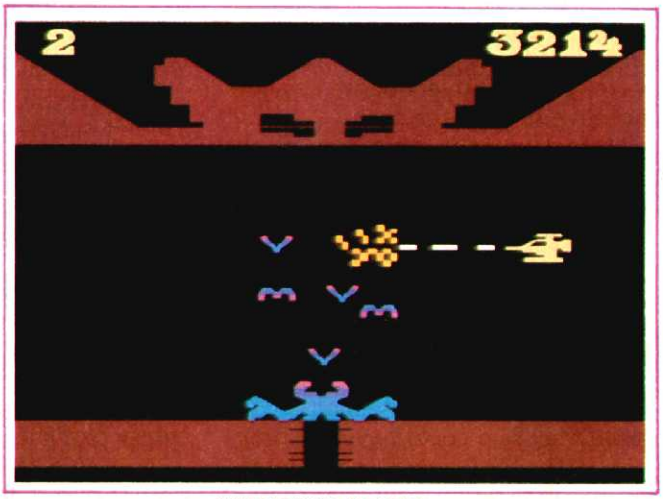
A small bar gives an approximation of the number of nasties yet to be vanquished per tunnel, and a signal rings out when there are no more.

The graphics are well-defined and colorful, the play action is very fluid, and the sound effects adequate. Though there is nothing really new in this game, the blend of various factors is done so well that the game succeeds as good entertaining fun.

(Ted Salamone)



BUCK ROGERS (SEGA)



SUBTERRANEA (IMAGIC)

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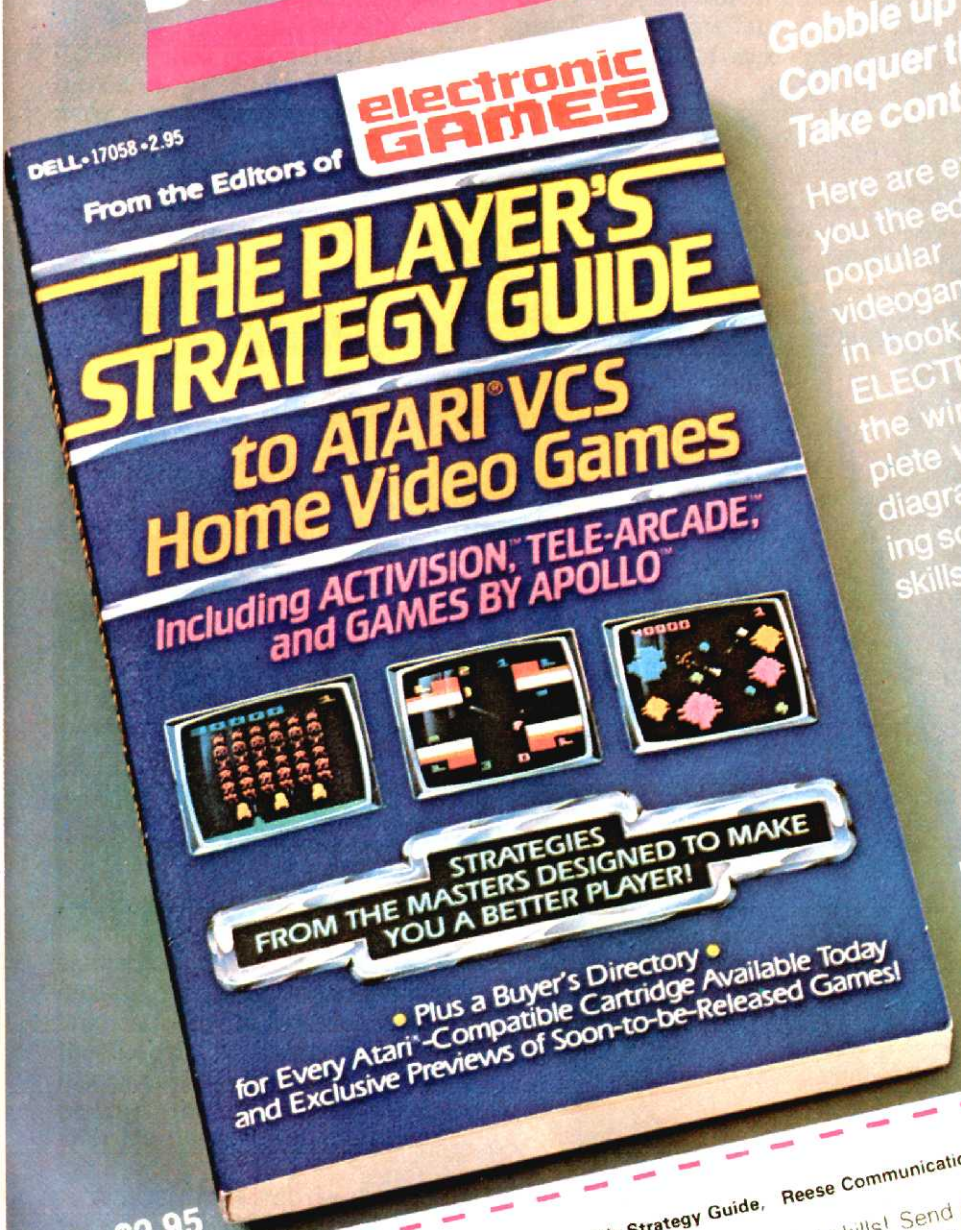
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ARCADE

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Coin-oppers Go Through the Strangest Gyrations

By TED SALAMONE

One of the most irresistibly likable things about people is their individuality, their personal style and their profound — and unerring — ability to make total fools of themselves in public. At times, even the hippest people act like they've just landed from a faraway galaxy.

Ironically, most folks end up doing their worst just when they're trying their hardest to appear in a favorable light. Think of all the times you've really knocked yourself out to impress a date. If you're honest, you'll have to admit that, more often than not, you babbled a bunch of gibberish or dropped a drink in someone's lap.

It was this philosophical point which I found myself pondering one day recently while I was visiting a pitch-dark arcade. Unable to spot the aisles, I groped my way through the shadows by playing from machine to machine.

By the time I inched up to **Xevious**, the meter on my wallet read 'empty,' but I noticed I'd collected quite a following. Maybe it was because no one else in the place seemed to know where they were going.

Since this would be my first crack at *Xevious*, I was a little nervous. Everyone crowded close around the machine, but I couldn't tell if they wanted to closely observe my star-quality joysticking or just avoid getting lost in the murky gloom beyond the flashing, spinning lights of the machines. That made me even more nervous. I felt like I was taking a shower on the 50-yard line at the next Super Bowl.

Yet, once my token registered, I had forgotten about all the onlookers. I was on my way to electronic glory, blasting land and sea targets with unbridled abandon.

As I played, a dull throbing invaded my left leg. This soon became one hell of a distraction. Not only did I have the usual case of sore fingers and frayed nerves, but one of my knees was ready to buckle.

The crowd dwindled noticeably. And those who remained were too busy aiding victims of my left-footed kicks to pay much attention to my score. The good samaritans had the situation under control, so I continued to play, occasionally glancing at those squirming around in agony. I honestly tried to make my errant foot behave. I must've been doing a bad job, because five minutes later someone suggested it would be a good idea if I left the game parlor soon.

I figured this was just another vidder hoping to get a crack at *Xevious*, so I ignored his advice. Besides, the moaning and groaning practically stopped once the ambulance arrived.

So I was pretty surprised to find myself calling my wife from the local pokey and having to explain how I had maimed a policeman with a well-placed boot. Fortunately, the judge turned out to be a videogame vet. After a stimulating conversation in his chambers concerning the relative merits of the Atari 5200 and the Colecovision, I found myself back in circulation once more. The judge even reprimanded the arresting officer for interfering with my game-in-progress, and the arcade owner chipped in with a bag of free tokens to thank me for giving his business all the extra publicity.

Always willing to profit from experience, I made a sincere effort to control my use of arcade 'english' after that. Oh, I was still a potential menace to anyone within 10 feet, but at least I was conscious when things got out of hand.

One change in my behavior is that I started wandering around arcades to study the antics of the players instead of concentrating solely on the machines. Not only did this provide a lot of entertainment, but it didn't empty my pockets nearly as fast as an afternoon of **Zaxxon**. (Advice to those intending to duplicate my research: Buy a few tokens and roll them around in your hand thoughtfully whenever the arcade owner approaches to find

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ARCADE ENGLISH

out why you're hanging around all night without playing.)

Even the Marx Brothers could've drawn some inspiration from the shenannigans I've observed in the family amusement centers. It's strictly the Three Stooges updated for the electronic age.

I particularly remember a crowd gathering around one would-be Luke Skywalker, who was blazing away at Imperial tie-fighters. He was a frenetic blur of kinetic energy from the waist up. He twisted and turned like a Grand Prix race driver while remaining firmly anchored to his stool.

I'm not entirely sure how he kept his perch, because the stool was hopping around the floor like one of the Zerks in **Spare Change**. While his thumping knees constantly tatooed the cabinet, he never failed to maintain his white-knuckled grip on the flight controller. And he never, ever stopped firing! His hands were locked in an unbreakable hold on the firing buttons.

It made me tired just to look at him. I wasn't too surprised when the owner and the arcade mechanic carried the spent star warrior away for treatment. Some witnesses insist they saw his fingerprints etched into the handle of the stick. One gamer, anxious for a crack at the now-vacant machine, touched the controls too soon and had to be treated for second-degree burns.

On another visit to a favorite game parlor, I noticed that the establishment's usually desolate **Buck Rogers** — it was tucked into a particularly unobtrusive corner — had attracted a dedicated player. The hardy soul was shoving tokens into the slot as if the machine would rise up and swallow him whole if it didn't get its full feeding.

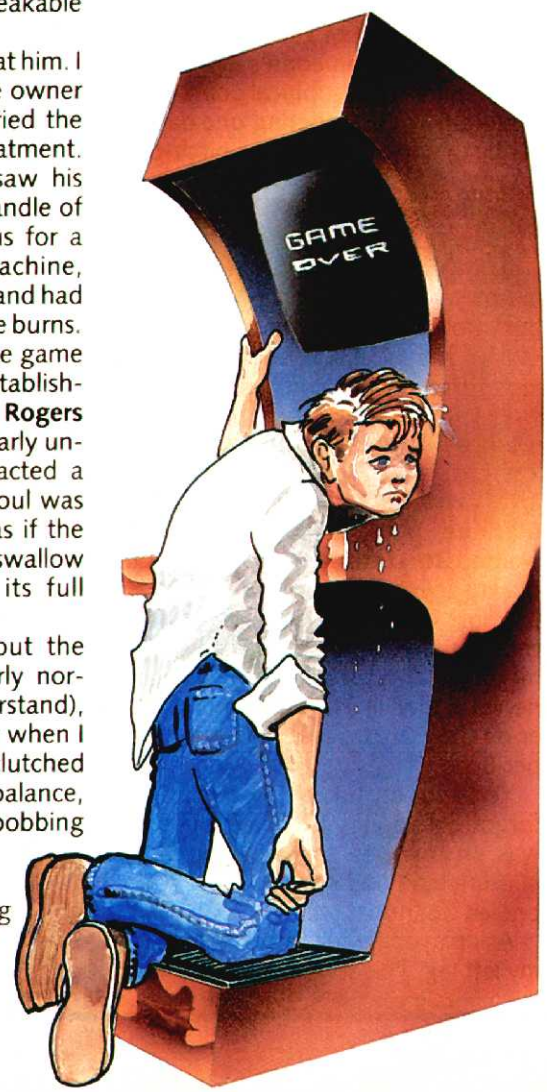
I ambled over to check out the action. Everything looked fairly normal (for an arcade, you understand), and I was in the act of leaving when I started to feel woozy. As I clutched tightly at a stool to keep my balance, I noticed that his head was bobbing and weaving faster than Mohammed Ali in his heyday.

It was positively disorienting I fell to the floor in a nauseated stupor. Dimly, through swimming vision, I made out the sickly green faces of fellow observers.

And still, no one could take their eyes off the wildly gyrating figure sitting in the control cockpit. The room grew hazy and indistinct, the game sounds seemed to fill my consciousness and everything seemed to gradually fade to black.

By the time I had recovered my senses, the Unknown Arcade Ace had departed, perhaps bound for other confrontations with other games. All he left behind was a new world's record score showing on the machine. He had englished his way into the electronic gaming recordbook and departed.

Even though I've pretty much stopped research on the whole question of arcade english, something keeps me traipsing from arcade to arcade, hoping to find the Unknown Arcader and learn the contortions that made him a champion. G



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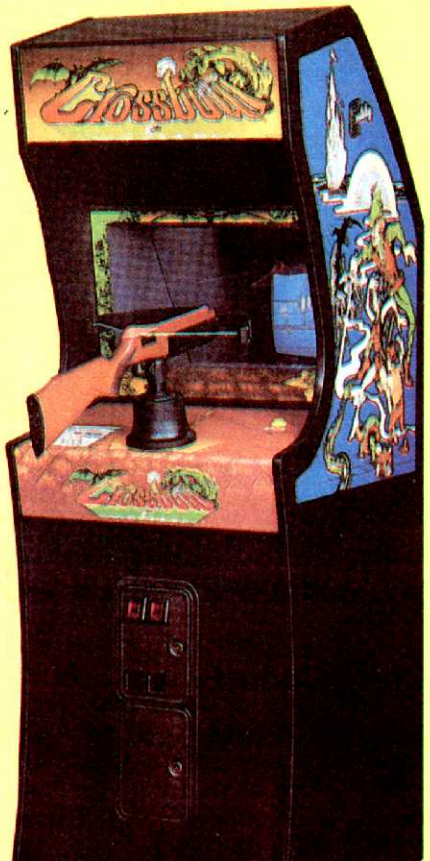
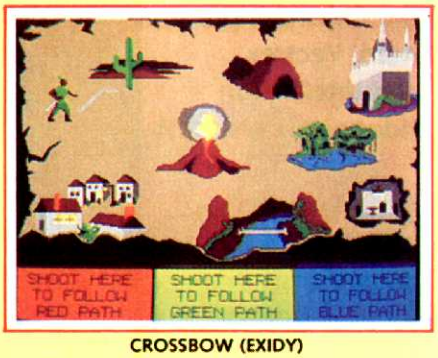
By BILL KUNKEL

Crossbow: Straight-Shootin' Adventure!

CROSSBOW (EXIDY)





CROSSBOW (EXIDY)

CROSSBOW

Exidy

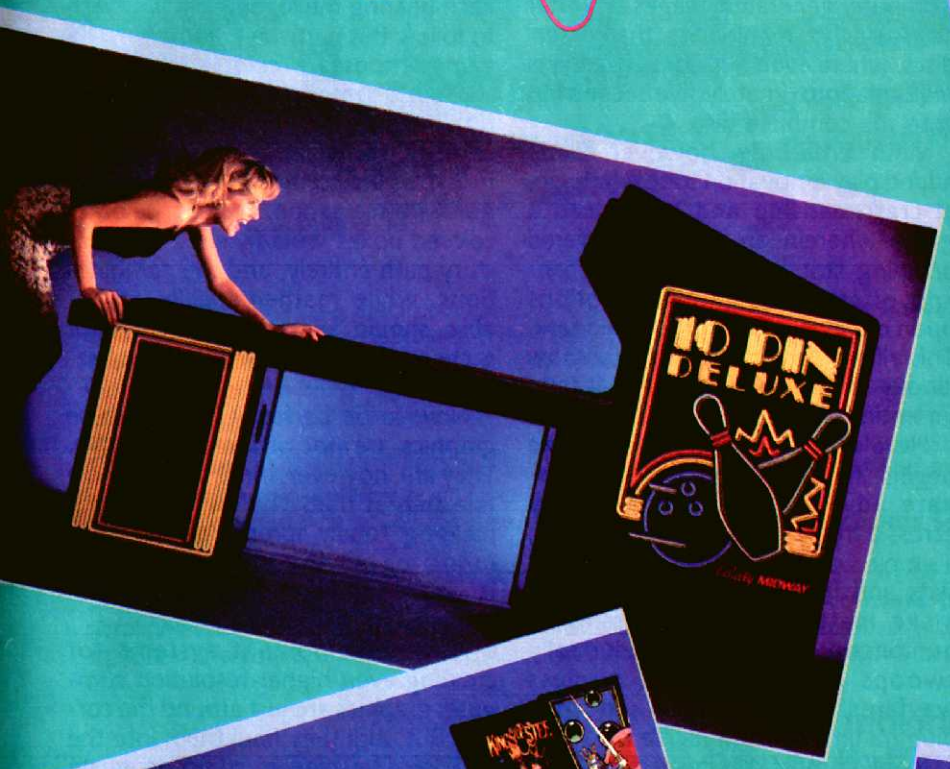
When the initial press releases rolled from the Exidy PR Departments' desks, **Crossbow** was being ballyhooed as another **Dragon's Lair.** In other words, Exidy was joining ranks with Mylstar, Atari, Bally/Midway, Cinematronics, Stern and all the other major coin-op powers in producing the next generation of laserdisc videogames.

By the time the excitement reached fever pitch, the industry was beginning to have second thoughts. Technological breathroughs were occurring so rapidly that it was reaching the point where plain old digitized graphics could nearly match even photographic, laserdisc-generated opticals. It was quite a simple problem, actually. The economics of silicon made computer memory grow like weeds, and once Midway introduced games such as **Journey** and **Whacko** the path was obvious: computers would soon be able to shrink the size of the pixels — the tiny mosaic-like blocks that comprise any image being reproduced — to the level of photographic-quality resolution.

Enter *Crossbow.* Being one of the early coin-op companies to put a premium on internal research and development, rather than, say, picking up the U.S. rights in the latest Japanese cast-off, Exidy has managed to keep pace with the industry's big

Bally MIDWAY T.M.

ARCADE



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guns remarkably well. To hell with laserdisc, they then decided, let's go with high-res computer opticals. Computer generated images are, after all, easier to manipulate than laserdiscs, where even high-quality players require approximately five seconds to scan the complete disc.

With *Crossbow*, however, Exidy added play innovation to technological craftsmanship and introduced a game wherein arcaders are offered braching storylines, with each scenario offering four possible options upon completion of the required task. This allows players to go at *Crossbow* all day long without ever duplicating an entire storyline.

Here's how it works. The game begins, for example, with the surrogate adventurer making his way across a treacherous mountain bridge, a simple walkway comprised of creaky slats and frayed-rope handholds. To make matters more distressing, a humongous pterodactyl periodically swoops down upon the hapless wayfarer, threatening to send him plummeting into the ravine below.

Now comes the best part. The arcader, you see, isn't using some space age joystick with autofire triggering device — no, my friends, the player is actually gripping a mounted, modified crossbow, firing a beam of concentrated light directly at the monitor! Talk about tactile feedback! Zap the leathery-winged beasty and your grateful on-screen rep saunters across the groaning bridge and attains the other side.

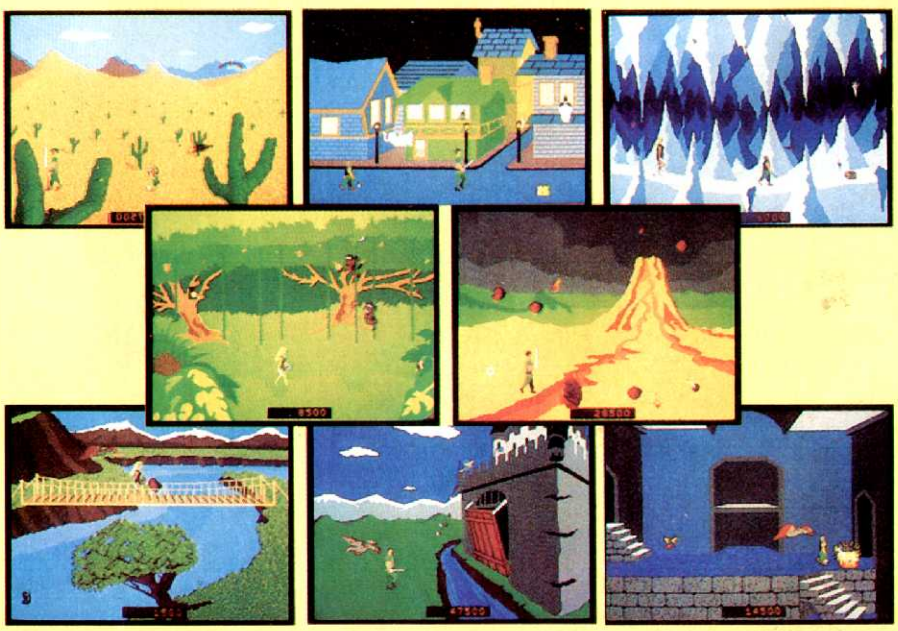
And so concludes the first adventure.

Now, at the bottom of the screen a quartet of color-coded boxes appear, each bearing the legend: "If you wish to follow this pathway, fire here." The gamer chooses a color and sends a shaft of computerized illumination right at his or her selection, and another, completely different adventure rears up, continuing the quest begun with scene one. Each of the other colored boxes would yield a different story path entirely, and the combinations, while mathematically attainable, should keep arcaders busy for quite a few tokens without fear of redundancy.

Now to be perfectly honest, these graphics are *not* of laserdisc quality. They are, however, the first step, and a fine step at that. The opticals have a pleasing, totally apropos quality, conjuring up all the enchanted green lands and terrible menaces that are the staple of quest-type contests.

New development systems for creating even higher-resolution computer graphics are just around the corner. But until they haul them into the local arcade, players could do much worse than gearing up for the techno-revolution with a good old-fashioned laser-beam generating crossbow. This is a fine piece of work, a ball to play, and Exidy deserves a hearty hand.

Gamers try to survive through eight different levels or scenes.



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ARCADE

Playing Games at Aladdin's Arcade

By DAVID LUSTIG

Whether they be in Yonkers or Sherman Oaks, enclosed shopping malls are no longer an uncommon sight. Customers can expect, and do get, the finest of stores while enjoying climatically controlled comfort no matter what the weather outside. And when the city of Louisville put the finishing touches on its new downtown Galleria, it was only natural to expect a busy arcade humming away inside.

Bally's Aladdin's Castle, one of six Bally arcades located throughout the Louisville area, is constantly awash in a sea of token-dropping humanity, but no more so than between 11 am and 2 pm. For within these three hours the vast majority of downtown shoppers and workers take lunch, many finding their way to the Castle and its pleasant environment.

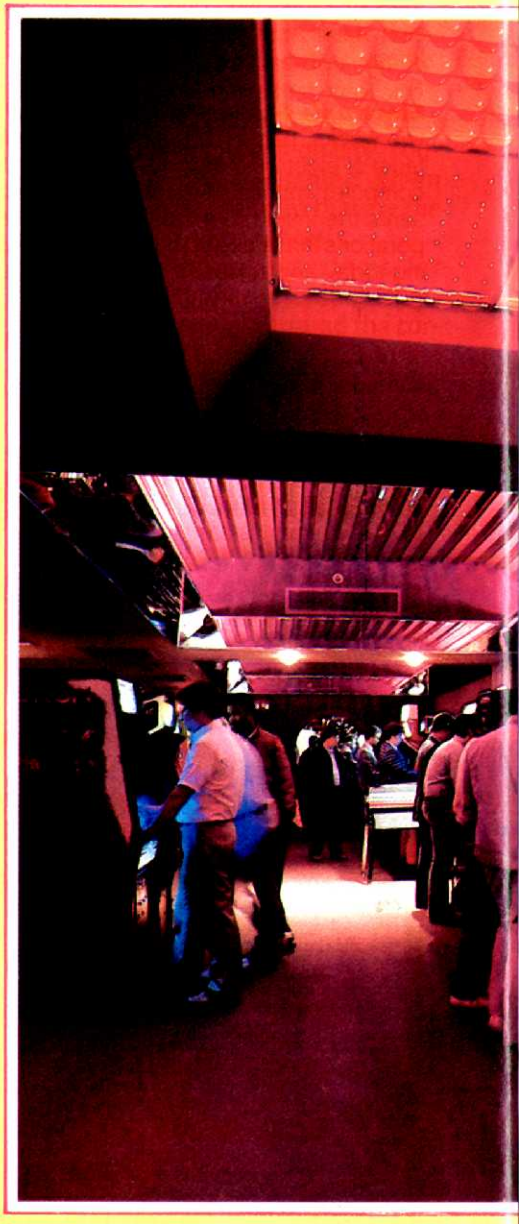
During those precious 60 minutes that fall somewhere in the three-hour lunchbreak timespan, when work is forgotten and play is of the utmost importance, there are as many people in business suits guiding controllers as there are kids in jeans and tennies.

Just don't take it for granted that "business people" automatically refers primarily to the male gender. Business women and secretaries are more than happy to slug it out with their male counterparts, many times being *more* than a match for their bosses.

In addition, management of the Galleria's Castle believes in mixing up the games rather than stacking many similar machines together. This allows for a more even flow of crowds and prevents certain areas from getting knotted up by customers who can be found waiting to play the newest video adventure.

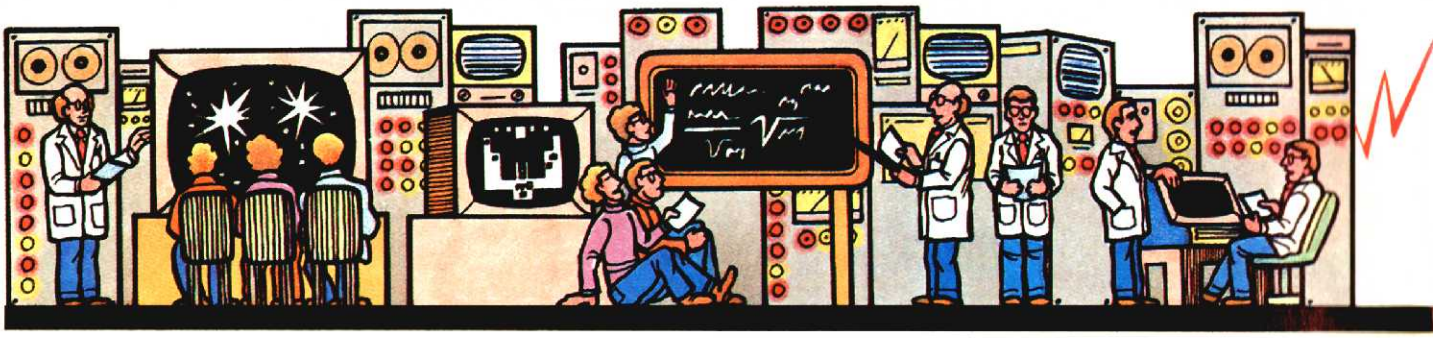
Currently the most popular games are **Pole Position**, **Q*Bert** and **Xevious**, but the old standbys like **Pac-Man**, **Ms. Pac-Man** and **Centipede** give the new games a run for their tokens. And as can be expected, you can't smoke or drink in an Aladdin's Castle. Under 16 years of age and want to play during a school day? Forget it until after 2:30 pm.

Besides having at least two employees on the floor at all times, mall security is low-key but ever-present. Since Bally believes in tokens rather than quarters, for those players active enough to plunk down five dollars for the keys to the many machines, the reward is 24 pieces of eight, er, tokens, rather than 20.



AMERICA

ALADDIN'S CASTLE



Rating the Videogame Jukeboxes

By HENRY COHEN

Over the past year a new category of videogame accessories has emerged that promises extraordinary user convenience and systems versatility. In addition, use of these products can, apparently, significantly extend the life of the videogame console and the game cartridges themselves.

We are, of course, referring to ROM selectors or ROM scanners. These devices are, basically, electronic switchers capable of housing up to 10 game cartridges that allow instant push-button selection of their contents.

There's more to a ROM scanner than merely switching things around. The unit must perform several functions in proper sequence. It must shut off power to the console, then to the cartridge; it should bleed voltages from specific components of the videogame system, then connect the selected cartridge to the console, repower the console and reenergize the cartridge.

These functions may be performed electronically or via a combination of electronic and mechanical devices. To determine the better approach — and to get an overall handle on these new devices — **EG** looked at two popular ROM selectors, the Romscanner VGA-10 from Marjac Technologies and the Videoplexer A800 from Compro Electronics Incorporated. Both of the units are constructed to work with the Atari 2600.

Before detailing the specifics of each model, one general observation bears mention. Each model had trouble with some game cartridges. In theory there should be no malfunctions; however, in reality some prototype carts simply wouldn't work with either unit. The most common symptom was a rolling picture which could not be stabilized by using the television's controls. To further confound the situation no common failures of the two systems occurred; that is, a cartridge that worked in one model did not necessarily work in the other and vice versa. In normal use, however, we had few problems. All this is to let you know that the scanners, although very good, aren't entirely perfect.

Since we preferred the Romscanner to the Videoplexer by a wide margin, let's review that model first.

The Romscanner is designed to integrate with the VCS and form a total game-playing package. The machine holds ten game cartridges and contains ten push buttons, standby and ready lights and a master power switch. Atop each push button is an LED to allow the user to instantly determine which game was selected. The unit is wholly electronic and all external signal connections are fully shielded. This latter point is important as it underscores the care and attention Marjac has placed in the engineering of this product. A metal insert is provided for late model 2600 — the original doesn't need it — allowing for a perfect ground connection to be made between the Romscanner and the host videogame console. The short (24 wire) connector strip is also shielded. This prevents stray interference from entering or leaving the system once it is fully operational.

The Videoplexer from Compro Electronics holds up to eight videogame cartridges.

The accompanying photos attest that the combination forms an impressive looking, functional design. The only problem is accessing the difficulty switches of the newer model VCSes. For this there is no cure. The user must reach behind the unit to get at them.

The system worked flawlessly and quickly. Switching time is under one second and is sure and steady. The only production game we had a problem with was **Space Invaders**, and the people at Marjac told us this situation was discovered early and immediately corrected.

As a result of our experience, we highly recommend this unit and apparently Atari agrees with us. It seems they are using Romscanners to demonstrate the VCS in several consumer-oriented applications.

The Videoplexer is not a bad unit, but it is not nearly as sophisticated, nor as well-conceived, as the Romscanner. To be fair, it's a reasonably good product and for some people, the only unit of choice.

The Videoplexer is styled to rest alongside the VCS and connects to it via a ribbon cable. The ribbon, however, is not shielded, and the unit holds only eight cartridges and is activated by a touch sensor panel. There are no indicator lights to show which game is being played — granted, the plastic dust cover *is* numbered. If the game title is marked on the cartridge spine and the playfield is recognizable, everything is fine; otherwise, the user will have to memorize which cartridge sits in what slot.

The Videoplexer contains some ex-

TEST LAB

posed circuitry including a fuse, a miniature relay and several disk capacitors. This is fine for adults, not so good for young prying fingers. It's not that there's a shock hazard present; it's more that the unit may be damaged by a curious child.

As this unit does not inject a reset voltage, nor ground out the appropriate components, switching time is a bit slower than with the Romscanner. It seemed to average a mite over a second. Also, because it depends, in part, on the normal discharge rate of some of the capacitors contained in the VCS, as the Atari ages, so too may the time the unit takes to reset the system.

The Videoplexer holds one potentially strong advantage over the Romscanner and that lies in its ability to daisy-chain. We could not try this technique as we had only one Videoplexer to test, but presumably one Videoplexer could be plugged into another resulting in a total of fifteen game cartridges on-line — or maybe more. Successful "cascading" would be a function of the integrity of the Atari power supply and microprocessor chip contained in the VCS. Still the potential is there.

NOTE: We are not recommending that you try this procedure because extensive analysis of the VCS circuitry indicates that eight to ten cartridges are the limit the VCS can endure. Going beyond this point may place too heavy a load on the CPU, causing it to fail.

Both units list at $59.95 and represent good value. If the experts are correct and the use of a ROM selector does, indeed, increase the life of the host videogame system and its games, this would be extremely low cost insurance. In addition, the conveniences offered alone are worth the price of admission.

For our part, we prefer the Romscanner for its sophisticated electronics, its overall design and the many user features it offers. Had we not been exposed to it at the same time as the Videoplexer, this reviewer might have been more impressed with the latter.

Marjac's Romscanner can hold up to ten videogame cartridges, and has a number of buttons to make accessing them easier.

By THE GAME DOCTOR

The Doc Examines the ADAM

The astronomical amount of mail Game Nurse Angela just lugged into my already-cramped office on the subject of Coleco's ADAM looks easier to handle in a bunch. Just this morning I read through 70 recent letters, and over 30 of them expressed everything from delight to outright anguish over the mysterious move over at Coleco. It seems no one can get the 800 number to answer, retailers didn't get nearly enough systems, and that

supposedly "complete" computing system is adding peripherals and memory expanders faster than the Yankees change managers.

Many third-party software creators lamented the data storage drive's slow loading time and were feverishly working on ways to either speed things up or, at least, build in game elements that attempt to disguise the load time (as the **Buck Rogers, Planet of Zoom).** Now that they can work on floppy disks for the new ADAM disk drive, I can see a whole fish barrel full of problems for ADAM users — for everything from software to repair support. The crystal ball is very cloudy on this aspect of ADAM's tomorrows.

As for software support, the line seems to be ridiculously top-heavy with so-called "personal improvement software" — you know, like the checkbook balances that are easier with graphite and paper and jogging tutorials that get you up every morning, turn on the monitor, computer and boot a disk that tells you to eat a banana and run two miles. Now this crusty old computer croaker isn't turning up his nose at this genre of software, but that vast army of computerists who went on-line last Christmas *really* want *entertainment* — games, art, music, construction sets, graphics creations software and so on.

Most of Coleco's early inventory reads like retreads of old ColecoVision staples and oddly-selected "greatest hits" game albums from popular independent third-party producers including Broderbund, Synapse, and Epyx. Coleco has always shown a tendency to shy away from original product, so let's hope for a fresher outlook down the road.

Okay, C-Visionaries, that's enough hot air for now. Now to the more formal questions, and the winner goes to an unsigned (!) questioner from the Bronx, N.Y. (Earth to questioner, send us your address and claim your EG t-shirt) who asks a question that many have mused but few had the nerve to ask.

Q: *I know what first party software is — that's the stuff the companies make for their own systems, right? And third party software is from dependent companies, like Activision and On-Line and Electronic Arts (my favorite!), correcto, Doc?*

Okay, now will you please tell me who makes second-party software. My friends and I have been going crazy trying to figure this out and, in desperation, we've turned to you.

A: Okay, gang, here's the answer to your brain twister: second-party software consists of programs written by users, such as yourself! I realize this sounds obvious, seeing it in cold hard print, but believe it or not, many industry bigwigs have consulted very privately with the master of mainframe malpractice on just that question. Thanks for having the guts to ask.

Now call us and get your shirt, *pocito.*

Q: *Hey, Doc, in response to your answer to the question concerning the inability of a game cartridge to produce speech without a voicebox, you said that existing systems can't do it. Atari has produced two games that can talk without any external voice module,* **Quadrun** *for the 2600 and* **Berzerk** *for the 5200. I haven't played either of these games, but I am sure they are fun. I guess you just spoke a little too soon, don't you?*
P.S.: I love your column and the entire magazine!!!

(Jerry Robertson, Cleaton, KY)

A: Yes, Jerry the old Doc got hosed by technology. See, while the game systems *themselves* have no voice-reproduction capabilities, the shrewdies at Atari simply put the voice module within the cartridge casing. Likewise, the 2600 is so software-oriented that new innovations are constantly going on within the plastic walls and silicon chips that comprise the game software. Not only do the games you mention utilize voice and sound revolutionization, but Atari's **Baseball** for the 5200 is a masterpiece of chit-chat, calling every play and pitch, and *Pitfall II* uses audio prototype techniques that will improve VCS sound considerably.

Speaking of speaking, a Canadian company called Interphase just did something with the Colecovision that Coleco themselves had declared impossible: Interphase's **Sewer Sam** for the CV introduces chip-produced voice.

See, even the people who make these marvelous machines are often oblivious to the potential of their creations. In this remarkable field, writing a column such as this is like attempting to catch a rabbit on foot. Three months or more elapse between the time these words are written and when you read them. In three months, the entire nature of the gaming world can change fifteen times. Of course I spoke too soon, but then, I'm only human (Whew. There, I said it!). In our field, the only things that are certain are all the uncertainties. G

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GAMES

Serious Reading for Serious Gamers

By CHARLENE KOMAR

If you have a young friend or relative who's into videogames and has reached the point where he or she wants to learn a little bit about the nation's hottest hobby, **Video Games** (*Archway, $1.95*) can be a good introduction. Oriented toward kids who might find adult-level reading just a bit beyond them, the book offers an overview of the videogame field in simple, but never condescending, language.

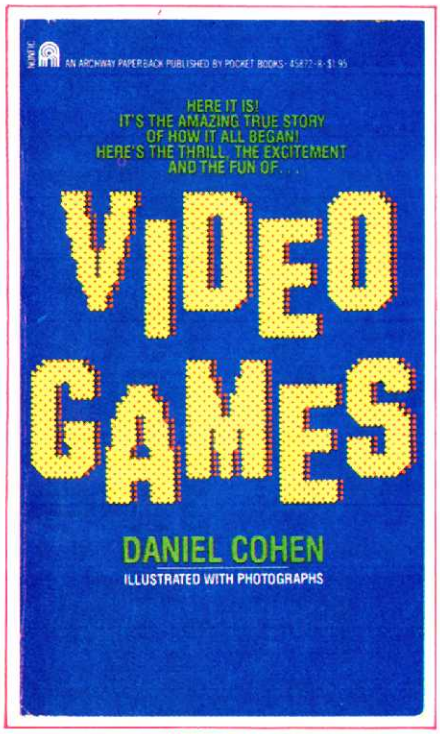
It starts with the history of the field, and gradually guides the reader through arcades, the **Pac-Man** craze, home videogame systems, computer gaming, table-top devices, electronic boardgames and even game watches. In between, the book doesn't flinch from confronting the tough topics, like the hostility videogames produce in some adults.

This is a particularly good chapter, because rather than just alluding to the problems that have surfaced, it examines the arguments and tries to explain what may really be behind the seemingly senseless opposition that appears from time to time. Another outstanding aspect of the book is the chapter dealing with game designers. It not only discusses some of the industry stats (mostly Activision people) but also talks about what it takes to create a winner.

The book wraps up well, adding a helpful section on "How to Find Out More" to the interesting but predictable section on games of the future. This is a fine introductory volume for the younger set. The true video fanatic would probably find it a bit boring, but that's not the person the 120-page book is geared toward. The youngster, videogame fan or not, who has found his or her curiosity piqued by the furor of the past few years will enjoy *Video Games*, and may learn something at the same time.

Quick, what's Pac-Man's favorite football team? You've got it — the Green Bay *Pack*ers! What, Ms. Pac-Man was a famous Egyptian queen? Cleo*pac*tra, of course. What's round and yellow and drinks blood? Count *Pac*cula!

These are just a few of the funnies in **The Pac-Man Riddle and Joke Book** by Mike Thaler (*Archway, $1.95*). Thaler bills himself as the Riddle King, and has a batch of previous books to back up his claim — not to mention the contents of this portable laugh-riot.


AN ARCHWAY PAPERBACK PUBLISHED BY POCKET BOOKS
HERE IT IS!
IT'S THE AMAZING TRUE STORY
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HERE'S THE THRILL, THE EXCITEMENT
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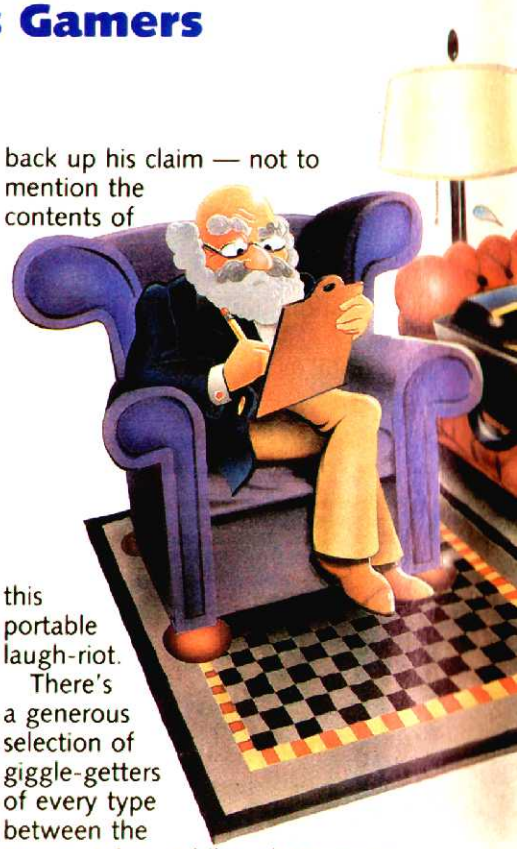


There's a generous selection of giggle-getters of every type between the covers. Jokes, riddles, short stories packed (ahem!) with puns, historical sketches, knock-knocks, lessons on pac-manners, and even ghost jokes for equal time keep the laughs coming. There's an illustration adding visual punch to virtually every guffaw.

Kids in the grammar school age range will probably find themselves falling on the floor a lot as they turn the pages. Other readers will probably grin (and, on occasion, groan) a lot. But anyone who doesn't at least crack a smile ought to be trapped in a tunnel without even a piece of fruit — and dot's the truth!

It's no secret that **Zaxxon** is one of the toughest, yet most entertaining, arcade games, so a how-to book on

LIBRARY

the challenging quarter-gobbler is a natural. *How to Win at Zaxxon* is designed to help you hurtle those walls, blow up the anti-aircraft guns and knock off the enemy jet fleet.

The 32-page book is a handsome effort. Large color illustrations help the reader follow the suggestions in the text. It averages about one drawing for every three pages. That proves to be a sensible proportion. Each of the enemy fortifications is shown next to an explanation of where it appears, how it works and what it's worth.

The writing is clear and concise, giving complete information. The style is so readable, as a matter of fact, that you hardly notice about half the book is devoted to the basics — a necessity for a game as complex as *Zaxxon*.

The advice on how to play *Zaxxon* is detailed and really expert. It's a shame that the author gets no credit. Not only is it unfair to the writer, but also to the reader, who ought to be able to be on the lookout for future efforts by the same person.

Suggestions are offered for both the novice and more advanced player, recognizing that it takes awhile just to learn how to stay alive without getting fancy. The advice for the expert is solid and helpful.

Without a doubt, this one is a definite winner.

Pilgrim in the Microworld *(By David Sudnow, Warner Books, $15.50)*

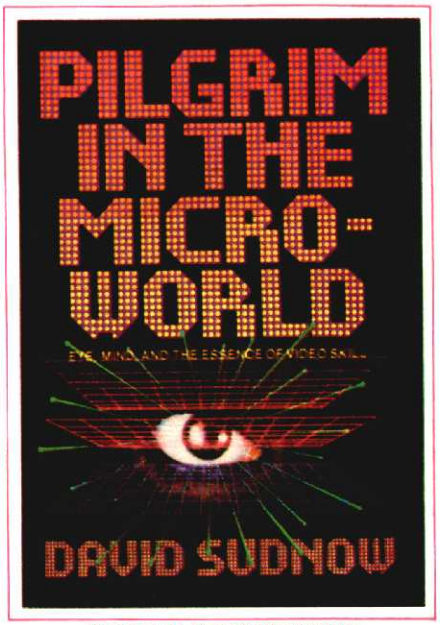
Surely the videogame obsession is no stranger to most readers of **Electronic Games**. Who among us hasn't found him or herself spending hours at a game where minutes were the original idea, hitting the reset switch again and again, muttering, "I just want to top my high score"?

That's more or less what happened to David Sudnow, author of *Pilgrim in the Microworld*. He tries **Missile Command** in an arcade he's entered only to fetch his son. Coincidentally, he soon thereafter is introduced to an Atari at a friend's party. The very next day, he adds his money to so many others' and buys a VCS and a **Breakout** cartridge.

Sudnow became obsessed with *Breakout*, determined to clear the screen. Not so different from most of us, he spent hours and hours before the screen. But Sudnow, a sociology professor, came to look at the game in a unique way.

He became fascinated with what was happening and why, with taking apart and analyzing every aspect of the experience. The author is also a player of jazz piano, and the similarities — and differences — between playing the piano and playing a videogame become a running thread throughout the entire book.

An analysis of how we relate to videogames, where and how they affect us, what their role is in today's world, would certainly be a valuable contribution to society. Despite a number of good points, this isn't that book. Sometimes, looking at one small part of a greater whole can produce a profound understanding of the whole. Not here. Sudnow limits himself too severely, becomes too wrapped up in limited aspects of a limited game. It doesn't stretch.



PILGRIM IN THE MICROWORLD

Some people are wedded to carefully inspecting and analyzing every aspect of their lives. Clearly, Sudnow is one of these, and perhaps similar personality types will enjoy the book. But one suspects that simply enjoying *Breakout* and wanting to win wasn't acceptable to Sudnow. Only over-inspection could make it intellectually respectable. Too bad he couldn't just have a good time.

TOY COMPUTERS THAT MAKE LEARNING FUN

Small Computers for Youngsters

BY JOYCE WORLEY

Nowadays everyone is talking about electronic education. It's estimated that there are already close to 200,000 computers in the nation's elementary school system, and this number is expected to double in the next year. When your child starts kindergarten, chances are that he or she will get a healthy daily dose of computer education along with the milk and cookies. And as kids progress, computers are becoming an ever-increasing part of the educational process.

There's a genre of toys especially created to prepare kids for this computer-filled world. These self-contained computer-like devices accustom youngsters to electronic education and get them ready to work with full-sized microprocessors, even while teaching a variety of subjects. The learning machines targeted for preschoolers can be operated even by kids who can't read, and the machines for older students complement and supplement elementary school curricula. Not only do the users learn how to operate and work with computers, they also get a headstart on traditional subjects such as spelling, math, geography, history, music and even computer programming.

Critics contend that there's little reason for parents to invest in these toys. They point to the price for these limited-purpose machines and say, "Wouldn't it be better to buy a family computer?" There's a lot of sense in this point of view. The learning computers aren't cheap, and recent price-slashes in many home computers have brought the two categories of machines closer in cost than they used to be. Some parents feel they can buy a full-sized machine that can serve the entire family, then spend a few hours with the child teaching the basics of its operation. Certainly, this may be true in many cases. If the family has other uses for the computer than just teaching Little Suzy geography or Junior his alphabet, then it may make more sense to invest immediately in the larger system.

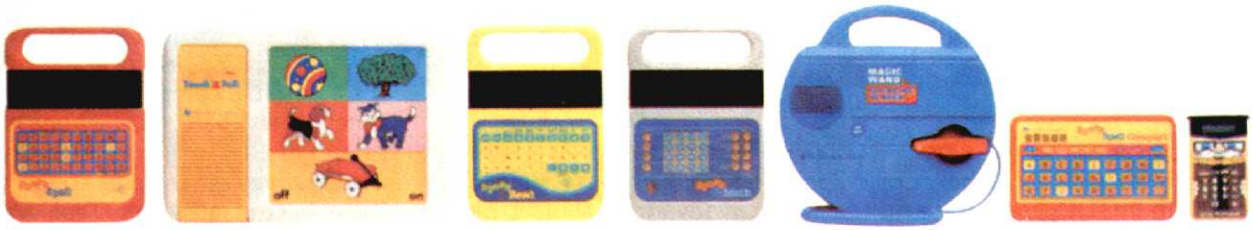
But there *is* a flip side to that argument. The computers for kids are especially designed for little fingers and don't depend on the user possessing any computer literacy at all. They take up very little room, unlike a regular computer system, incorporate their own viewing screens so the family t.v. isn't tied up by the baby learning to count and are easy to operate right out of its packing crate. Any instruction needed is usually self-administered by the teaching toy.

Perhaps the most important difference in buying one of these systems especially made for the junior set, and purchasing a family computer, is the type of available software. Teams of educators have combined talents to create bright, colorful, easy-to-understand lessons for the teaching toys. Where else but in a packet especially designed for kids would you find programming that covers the wide range of topics they must absorb before they start into secondary school.

Just as "Sesame Street" and "The Electric Company" enrich the environment of tots watching t.v., these computer-like toys make the world a fuller, more interesting and challenging place for youngsters.

Parents have several excellent choices among the toys that teach. A good first choice for pre-schoolers might be *TLC*, from Mattel. *The Teach & Learn Computer* is designed for kids ages 3-8. It's a lightweight portable computer with a pressure-sensitive panel instead of the regular com-

Tiger's durable cassette player is built to take it



puter-style keyboard. Each program activity disc for the TLC comes with a colorful overlay for the touch-sensitive panel, and the computer responds to the child's input in a friendly human voice. Like most of these systems, *TLC* operates on batteries, so the child need never go near an electrical outlet.

The Teach & Learn Computer comes with an introductory learning Volume that contains six program activities for kids aged 3-8, with overlays for each. Additional Learning Volumes are more age-specific. "Reading Readiness" helps tots aged 3-4 learn the alphabet and other basic reading-preparation skills. "Basic Learning" teaches shapes, colors and counting, using games and quizzes to make lessons fun for the child. Other programs teach tots about animals, stories and rhymes, and six "Sesame Street" Learning Volumes use the show's motifs to teach the alphabet, numbers, shapes, and include a variety of games and activities just for the youngest computer-users. Programs for kids ages 5-6 or 7-8 include more advanced lessons on similar topics. The *TLC* sells for $50 and separate Learning Volumes, each with six program activities included retail for $10.

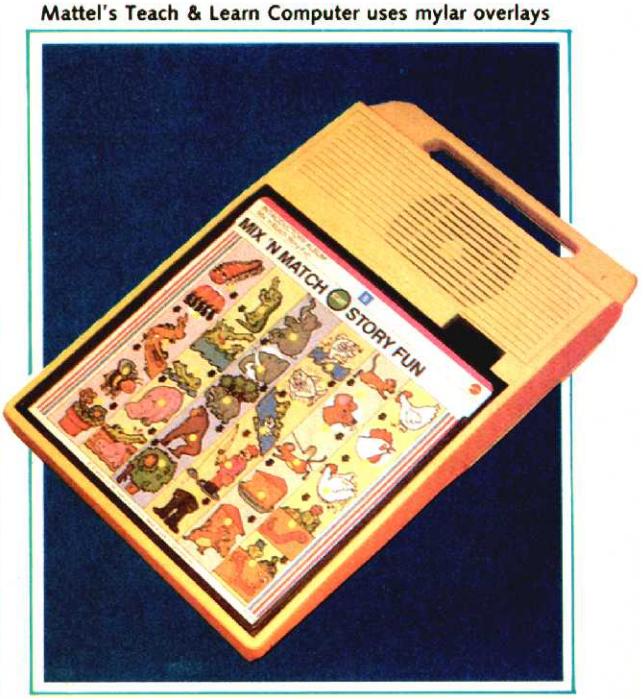
Coleco's *Electronic Learning Machine* uses two-sided programmed activity cards and keyboard overlays. Separate buttons, rather than a pressure-sensitive board, allow kids aged 4-9 to interact with the machine. It comes with 32 cards plus a storage caddy. The activities cover a large variety of subjects, including spelling and word games, math problems, general knowledge questions, musical lessons, and even pre-school picture puzzles. All of this is done to a merry assortment of flashing lights, sounds and music that combine to hold the child's attention and reward correct answers. It automatically turns itself off to save battery drain if left unused for a few minutes.

There's a library of activity card sets available for the *Electronic Learning Machine*, each clearly identified by suggested grade or age level to make it easy for parents to choose the right ones. These range from pre-school to grade 4, and cover traditional subjects that help develop school-oriented skills. Spelling, math, science, music, places, plants, animals, famous people, and riddles and puzzles are just some of the topics available. Some sets use cartoon characters like Mighty Mouse, Superman or Wonder Woman to tutor the lessons, and all are colorfully created to make learning fun. *The Electronic Learning Machine* retails for $40, and extra activity card sets are $10-$15.

Tiger Electronic Toys' *K-2-8 Talking Learning Computer* is just the thing for kids from kindergarten to eighth grade. The compact unit has a 1500-word vocabulary, and it speaks in a robotic voice so clear and concise that even a 5 year-old needs no directions, other than to listen to its instructions

Big Bird and the Cookie Monster adorn Tiger's Sesame Street cassette player

Mattel's Teach & Learn Computer uses mylar overlays



TOY COMPUTERS

then respond on the tough-sensitive keyboard. The subjects it teaches concentrate on math, spelling and reading.

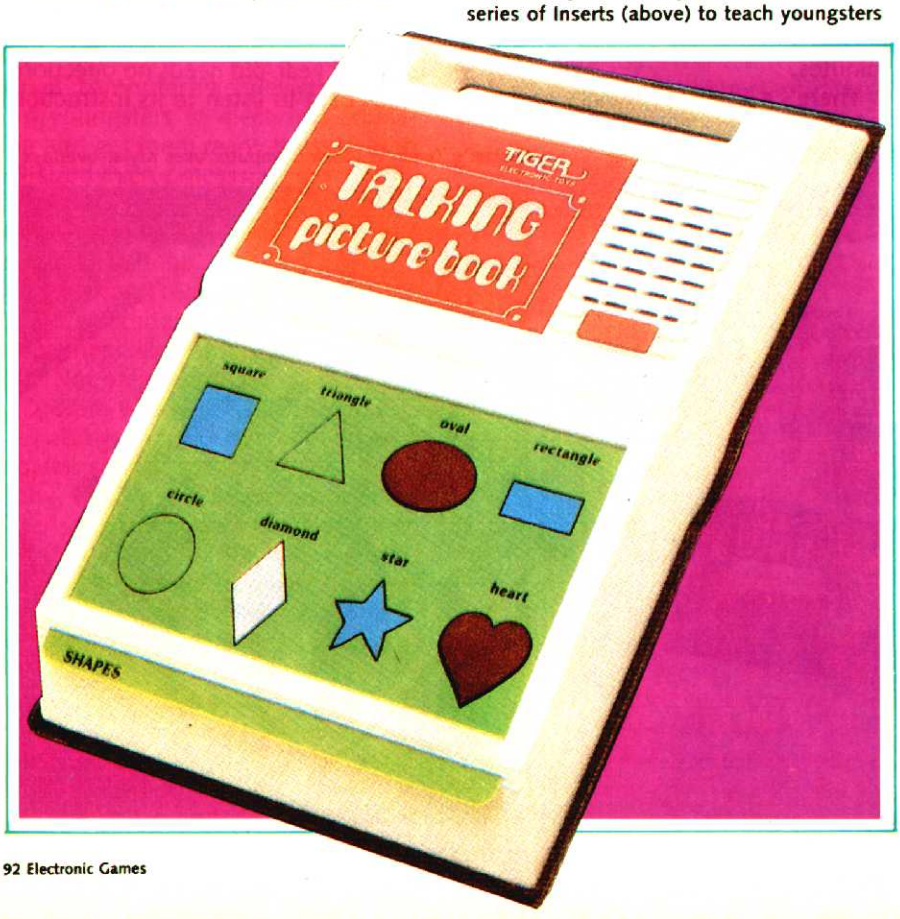
When the child turns on the computer, it says "Hello" in an easy-to-understand mechanical voice. Then it offers its menu of activities like spelling, numbers, the alphabet, tables of addition, subtraction, multiplication and division, and counting — a total of 15 varied activities. For example, choose "Spell" and the computer will ask the skill level desired. When the skill is entered, the computer speaks a word and asks the child to spell it. A wrong answer prompts the computer to say, "That is incorrect, please try again." A correct answer receives a congratulations, then another word.

Adding advanced subject plug-in modules increases K — 8's vocabulary word list, advances the difficulty of the math lessons, teaches grammar or geography, or plays word games. The mini-screen built into the unit is bright and clear with fluorescent light display, and the 56-key membrane keyboard is easy to use. A two-inch speaker built into the unit delivers its message loud and clear. The solid-state, high-impact plastic *K-2-8* should provide years of service, bridging the gap between learning and fun. The computer lists for $100 complete with its 15 activities, and advanced-subject modules are available at $30 each.

The Children's Discovery System by Mattel Toys is a computerized learning aid designed for kids age 6-13. It's a portable computer with a multi-function keyboard, 2K memory, musical sound effects, and a Liquid Crystal Display viewing screen. It comes with three built-in activities: Type Mode, which helps the child attain word skills, including spelling, vocabulary and correct word usage; Music Mode to teach music concepts and composition; and Art Mode to let the child draw electronically. There's a large library of software available. Each *Learning Fun Module* comes with a keyboard overlay plus an activity book with ideas to make learning fun, and the subjects covered range from math to words, art, music, arcade action (for reflex, judgement and coordination skills), memory and logic (shapes, patterns and alphabet codes, plus memory skills), geography, the nation's presidents, foods (nutritional education), fractions, science, and even computer programming. Mattel plans a steady stream of these teaching programs in the future. *The Children's Discovery System* sells for $75, and additional modules are $20 apiece.

Mattel's CDS has a tiny LCD monitor

(Below) Tiger's Talking Picture Book uses a series of Inserts (above) to teach youngsters



Educators know that children do best if they're given a lot of mental stimulation. An infant lying in his crib surrounded with bright toys, mobiles and colorful things to look at will be more alert and interested in the world around him. A child whose mother talks and plays with him will be more adept with words and games than the one who is left alone. Kids who watch "Sesame Street", "The Electric Company" or any of the other programs especially made for youngsters learn faster than children who are given no mind-expanding experiences at all.

It follows that kids who get a head start with their lessons through intelligently chosen, well-designed toys will do better than those who approach their first day at school with nothing but an apple and a good luck kiss from mama.

And that's what these toys are all about. They bring the educational process into the home, involve the family in the child's progress, and give the youngster the best start that technology has devised to date. These are environment-enriching activities that pay a huge dividend by making it easier for kids to absorb formal education.

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To celebrate our being the host nation in the 1984 Olympics, the United States Mint has issued for the first time in history three types of coins to commemorate the spirit and excitement of the Olympic Games. And it is the first time in some 50 years that the United States Government has minted a gold coin.

All profits from the sale of these special coins will go toward the U.S. Olympic effort, for training expenses, the ever-rising costs of sending our team to the Olympic Games, and for the staging of the 1984 Games in Los Angeles.

Fine artistry of their designs.

The 1983 silver dollar coin (.77 troy oz. silver) has been designed by Elizabeth Jones, the chief engraver at the Mint. The obverse of the coin represents a dramatic engraving of the classic Greek discus thrower.

SUPPORT THE HOME TEAM

The 1984 silver dollar coin (.77 troy oz. silver) has been designed by Robert Graham. It will bear a representation of the Gateway to the Olympic Coliseum.

The 1984 ten dollar gold coin (.484 troy oz. gold, 21.6 karats) was designed by John Mercanti from a concept developed by James Peed. He has captured the scene of the Olympic torch bearers in delicate detail.

These magnificent Olympic coins are flawless gems.

They are now being offered in "proof" condition, which involves special multiple striking, resulting in particular sharpness of detail and a flawless mirror-like surface.

You have four options.

You can buy the single 1983 or 1984 silver coin; the two-coin set which includes both silver coins; or the three-coin set which features the 1984 gold coin, the 1983 silver and the 1984 silver coin.

The more coins you purchase, the more you will be helping our fine Olympic athletes. And that feeling of helping and participating in this important Olympic event is a gift to yourself.

Coins may be purchased through your local post office and at participating banks and coin dealers across the country. Or, write to: U.S. Mint, Olympic Coin Program, P.O. Box 6766, San Francisco, CA 94101.

* ™ L.A. Olympic Organizing Committee

M-1

Sleeping Beauty: A Royal Good Time!

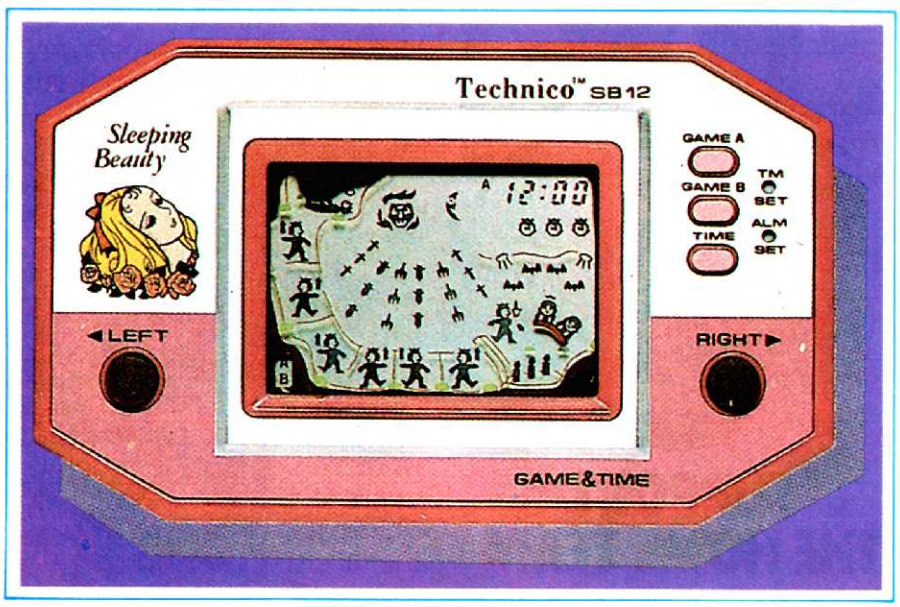
By JOYCE WORLEY

SLEEPING BEAUTY

Inventa Game & Time/$14.95

Electronic gaming was primarily a male sport until the advent of home videogame systems. Even though women did play **Pong** in the arcades, manufacturers never really gave the ladies much attention, so there have been very few games designed specifically with females in mind. This is especially true in the stand-alone gaming arena, where the new electronic marvels are designed with only one eye toward the adult crowd, with the real duces a picture of the wounded prince lying on his back, followed by a miss mark. Three such losses and the game ends.

Sleeping Beauty may not be the most challenging game ever created, but it is very cute, and just exactly the thing for little girls (or big ones!) who might like a tiny diversion that's pretty and feminine. Not only will the lady get a pocket full of fun from it, but also a convenient clock with an alarm so that it won't take a prince to wake her up on time!



control of an on-screen prince. This royal rescuer must place candles on the table next to the sleeping princess by picking up a taper on the left side of the screen, then carrying it to the table on the right. But the monster who is holding the princess captive doesn't just sit back and let the prince steal her without a struggle. The bad guy rains weapons down on the hero's head, so he has to keep a close watch on the sky to stay out of the path of falling bombs, pitch forks and swords. When he places three candles, the princess awakens.

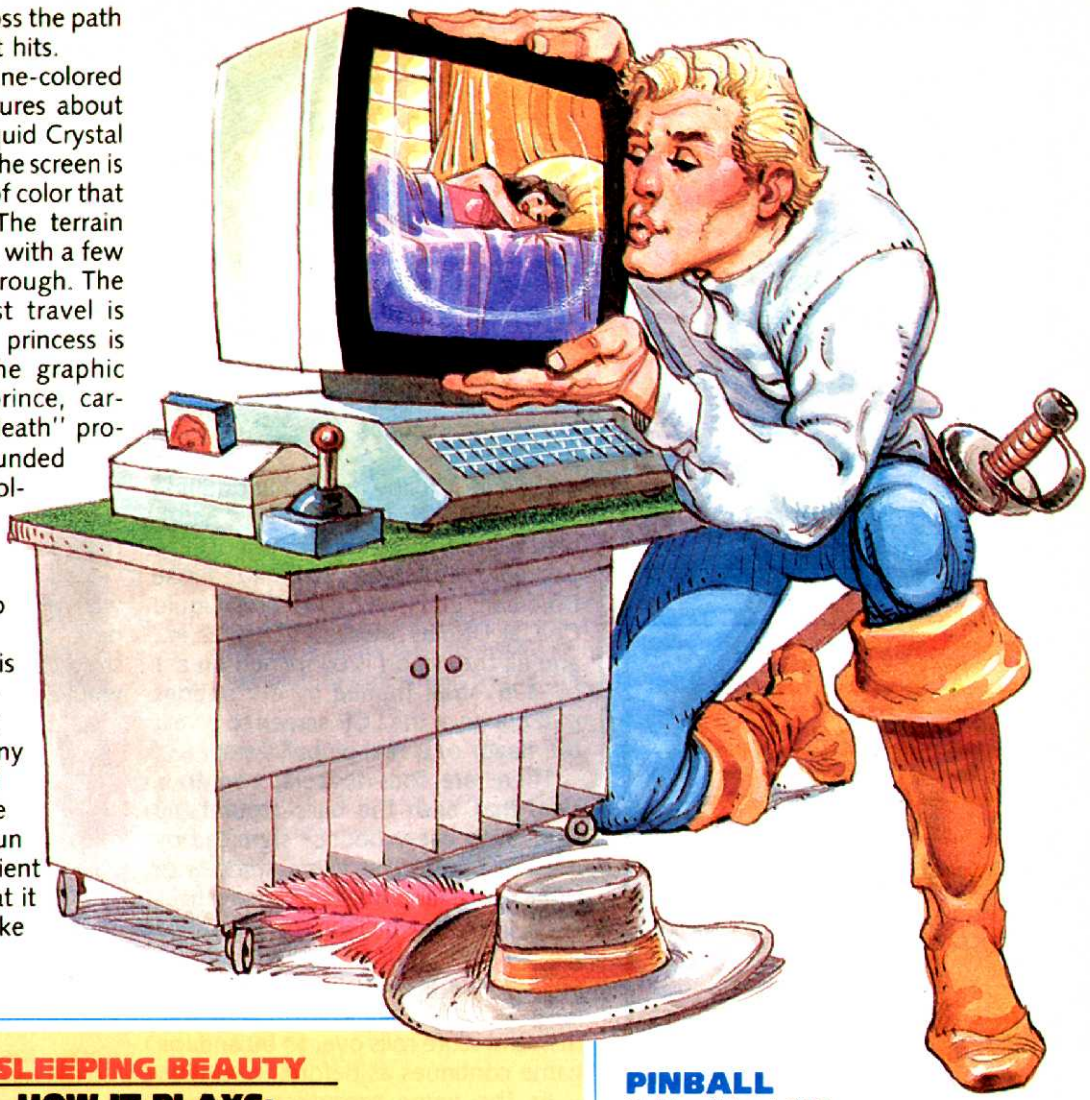
But he still has a battle to rescue the fair maiden, since she's surrounded by a flock of bats. When the prince manages to swat the four winged guardians, the round ends. The princess smiles, her crown appears with a light, and the sun shines down on the happy pair. Then a new round begins.

Sleeping Beauty is, of course, a very easy contest. After only a little practice even a novice gamer can dodge the weapons that rain down on the prince, then drive the bats away and save Sleeping Beauty. The falling weapons drop rather slowly, and the prince can race along at a pretty good pace, so it's not too difficult to stay out of the way. The entire game turns into an exercise in judgement, patience and timing, as the arcader decides whether the

prince has time to rush across the path of a falling sword before it hits.

The pretty mauve and wine-colored game and time unit measures about 2½ by 4½ in., and the Liquid Crystal Display is 2 by 1½ inches. The screen is enhanced by a few points of color that help add visual interest. The terrain under foot is brown stone, with a few blades of grass showing through. The pathway the prince must travel is traced in brown, and the princess is behind a red barrier. The graphic animation features the prince, cartooned in profile. Each "death" produces a picture of the wounded prince lying on his back, followed by a miss mark. Three such losses and the game ends

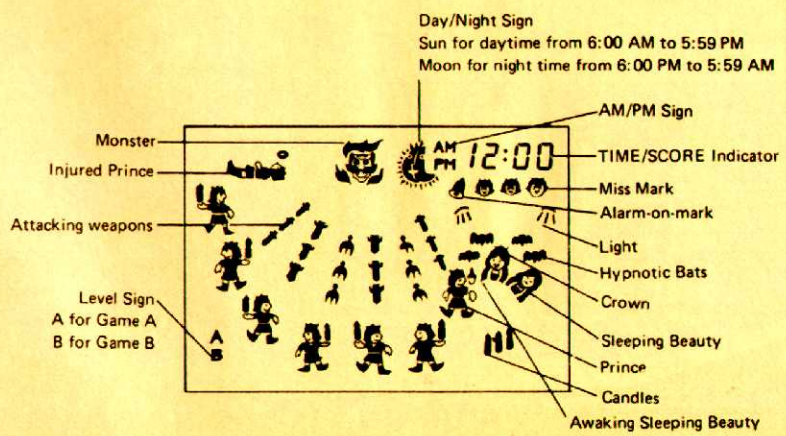
Sleeping Beauty may no be the most challenging game ever created, but it is very cute, and exactly the thing for little girls (or big ones!) who might like a tiny diversion that's pretty and feminine. Not only will the lady get a pocket full of fun from it, but also a convenient clock with an alarm so that it won't take a prince to wake her up on time!



SLEEPING BEAUTY

HOW IT PLAYS:

There are two skill levels, A (easy) and B (slightly faster). Press the correct button to start at the difficulty desired, and the highest previous score for that level will be displayed, followed by the round number. Then the prince begins his rescue mission. Guide him back and forth using the left and right movement controls. The gamer scores one point for every rightward step taken by the prince, and 10 points for each candle placed on the table. Rescuing the princess is worth 100 points in round 1, 200 points in round 2, and so forth, up to 500 points for the fifth round and beyond. All misses are erased when the tally reaches 3000 points, and the highest score possible is 9999.



PINBALL

Gakken/About $30

In some ways, electronic gaming owes its existence to pinball machines. That's the area where much of the pioneer design work was done. With this in mind, it's surprising that modern electronic gaming hasn't done more to bring pinball machines into the home, especially where stand-alone and handheld games are concerned. True, there have been lots of pinball videogames, and at least two really outstanding computerized pinball contests. But so far, the handheld field has only seen a scatter-shot sampling of this type of device, most of which weren't too successful.

One exception was "WildFire", by Parker Brothers. This unit properly ranks as the best pinball game ever devised in the stand-alone field, closely followed by Entex' "Black Knight", a fantastically decorated handheld featuring a gorgeous drawing of the Black Knight, straight from the Williams pinball arcade game by the same name. Entex also mined the arcades for a pinball cartridge for its Select-A-

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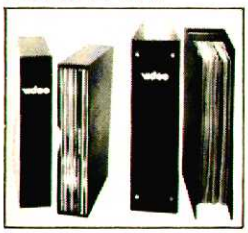

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Game programmable tabletop game. Though it lacked the spectacular graphics that pinball wizards love, it did boast individually controlled flippers, on-screen scoring, variable bumper values, and six skill levels—quite a lot of game action for such a small package!

Gakken is following in that tradition with **Pinball**, this year's hottest handheld ball-slinging contest. Best of all, it packed the fun into a palm-sized case that can go anywhere. The Liquid Crystal Display measures 2 by 2 in., and all the action is contained on a 1 by 2 in. strip, framed by decorations that enhance the LCD screen to give it the flavor of a real pinball game.

There are four flippers, two to a side, that bash the balls around the field, with every bounce signalled by musical tones. The game starts with three balls, and the score advances each time the ball hits a wall. The game awards a bonus ball at 100,000 points, to a maximum of four bonus balls. The tally advances to 1,999,900, then the score rolls over to 00 and the game continues as before.

As the game progresses, various targets light to provide new scoring opportunities. Bumpers, lighted circles and a bonus pockets keep the action interesting, as the balls bounce from point to point and the score mounts up, until all the balls are used and the game ends.

There are two variations of **Pinball**. Game A is slightly easier, since bumper targets and scoring circles are already on-screen when the game begins. In game B, these extra scoring goals don't appear until the ball has passed over the spot where they will be. Then bonus points are added to the score with each subsequent touch.

The action is fairly satisfying; the decorations that frame the LCD screen are exactly the touch of color that's needed to brighten the game, and the sounds add excitement to make this more like a real pinballing experience.

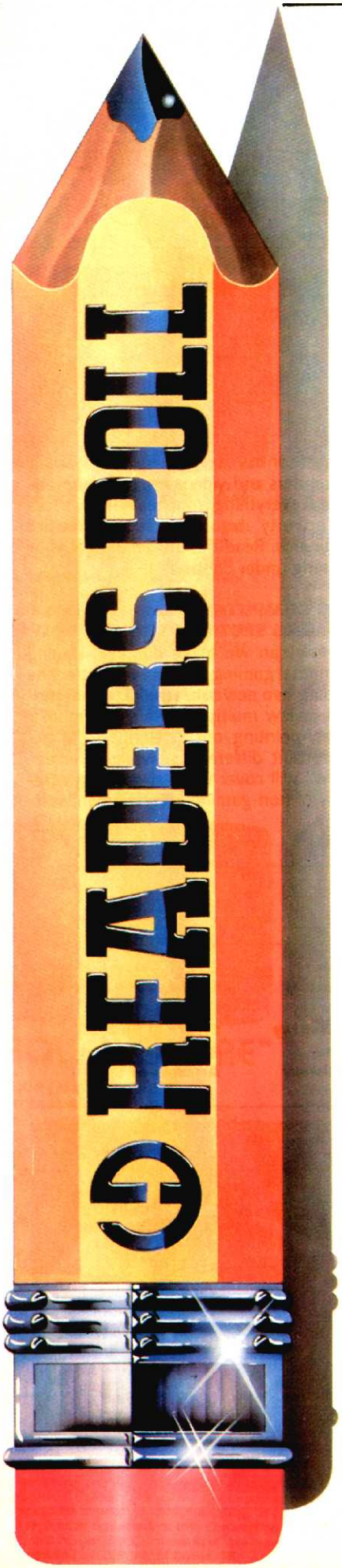
You don't have to be a pinball wizard to enjoy it, but Gakken has done such a nice job on this palm-sized pocket arcade that even Tommy would be sure to call it a hit! G

PINBALL

HOW IT PLAYS:

Use the left button to choose Game A, or the right for Game B, then use the right button to put the ball in play. The first press releases a ball into the firing chute and the second sends it spinning into the playfield. Then the same two buttons control the left and right flippers. To play without sound, press the alarm button, then press time. When not in use as a game, **Pinball** functions as an accurate pocket-watch and alarm clock, so you'll always be on time to play a round!

Gakken's *Pinball* puts a poolhall in your hand.



Interaction between the readers and editors of **Electronic Games** helps make this a better magazine. The more we here at **EG** know about who you are and what you want to read, the better we can satisfy your needs and desires. That's why we run a Reader Poll in every single issue of this magazine. Rest assured that even though we protect the anonymity of every respondent to our survey, the editor personally reads each and every ballot received. And of course, this is also your ballot for casting your vote for the most popular videogames, computer game programs and coin-op arcade machines.

Please return this poll sheet — or a photocopy, if you prefer to keep your **Electronic Games** in perfect condition — to: **Electronic Games,** 460 West 34th Street, 20th Floor, New York, NY 10001.

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☐ Under 2 ☐ 3-5
☐ 6-11 ☐ 12-17

Please indicate the number of cartridges, disks, etc. which you own or plan to buy within the next 12 months for the systems below:

	Own	Plan to Buy
Atari VCS	____	____
Intellivision	____	____
ColecoVision	____	____
Odyssey²	____	____
Atari 5200	____	____
Other Videogame System	____	____
VIC-20	____	____
Atari 400/800	____	____
IBM Personal Computer	____	____
Apple II	____	____
Commodore 64	____	____
TI 99/4A	____	____
Other Microcomputer	____	____
Video Cassette Recorder	____	____
Videodisc Player	____	____

How many hours per week do you spend playing various electronic games:

☐ Less than 2 hours ☐ 2-5 hours ☐ 6-10 hours ☐ More than 10 hours

How much do you spend per week on electronic games:

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How many people, besides yourself will read this issue of Electronic Games:

NAME OF GAME **SYSTEM**

My favorite videogame cartridges are:

1. _____
2. _____
3. _____

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1. _____
2. _____
3. _____

My favorite coin-op games are:

1. _____
2. _____
3. _____

Coming Attractions

CAN 'STAR WARS' LIGHTNING STRIKE TWICE?

When a creative genius like George "Star Wars" Lucas invades the software field, that's front-page news. His company's first two cartridges for Atari, **Ballblazer** and **Rescue on Fractalus** are going to knock your socks off. Next issue, ELECTRONIC GAMES goes beyond the headlines for an exclusive tour of the Lucasfilm design studio. If you want to read the behind-the-scenes scoop about this pair of terrific games, September's EG is the only place.

THE GREAT GAME DESIGN TALENT HUNT

The care and feeding of electronic game designers, the newest media superstars, has become a full-time job for more than one software publishing executive. How do companies win, woo and — most importantly —keep the top talents? You'll get an insider's view of the battle for programmer-power in this hard-hitting expose.

THE PLAYERS GUIDE TO COMMODORE 64 GAMES

More than a million Americans have bought Commodore 64 computers since the system came on the market in 1983. Now, right on schedule, here comes the flood of software needed to turn this computer into one of the best home arcades around. EG's September magazine-within-a-magazine spotlights the great games on cartridge and disk for the C-64. So whether you prefer all-out action or strategy-oriented simulations, this shopping guide will point you in the right direction — and maybe even help you save a few bucks you might've spent on a dud.

1984 CONTROLLER UPDATE

You can't tell the joysticks, paddles, tablets, keypads, trackballs and mouses — mice? — without a scorecard. And here it is. This thorough review of command control devices for the leading computers and videogame machines includes everything from heavy-duty sticks to novelty items like foot-operated joyboards. Read this article and get your gaming under control!

THE COMPUTER GAMING SECTION

How can we make our field-leading computer gaming section even better? By adding two new sections. "Translations" will review multiple editions of popular titles, pointing out similarities and all-important differences, while "Recreations" will cover the fast-growing category of non-gaming entertainment software.

There'll be plenty of other exciting articles and features of interest to arcaders, plus these regular columns:

- ★ **Passport to Adventure**
- ★ **Q&A**
- ★ **Inside Gaming**
- ★ **Arcade America**
- ★ **Computer Gaming**
- ★ **Programmable Parade**
- ★ **Switch On!**
- ★ **New Products**
- ★ **Test Lab**
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- ★ **EG Hotline**
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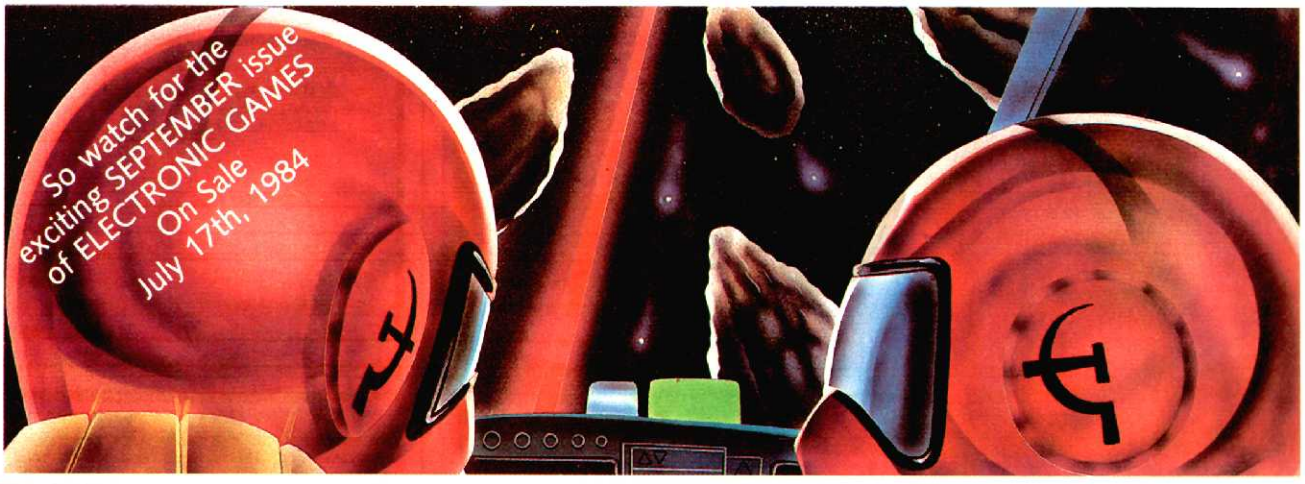
- ★ **Mini-Arcade Gallery**
- ★ **In Control**
- ★ **Strategy Session**
- ★ **Insert Coin Here**
- ★ **Articles of War**



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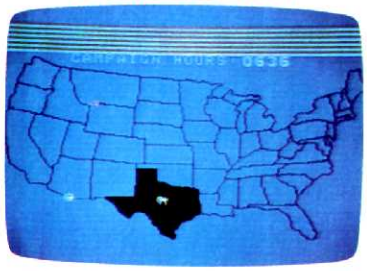

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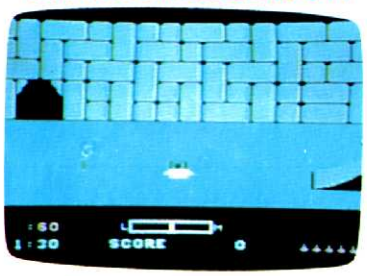

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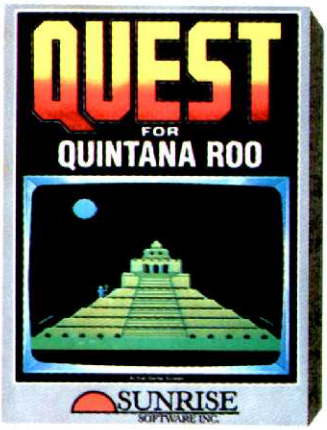
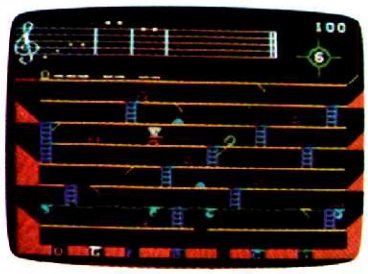


A MAESTRO!



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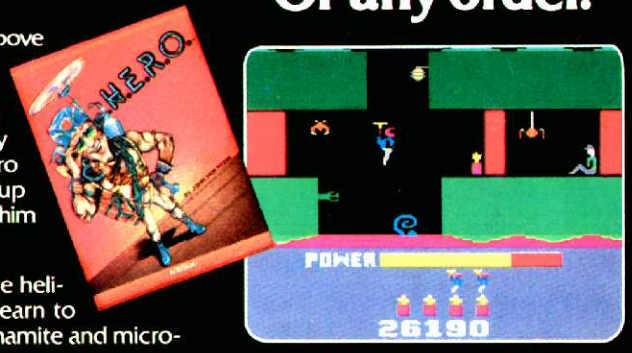

Next, all you have to do is get through to the miners. It's the 'get through' that gets messy. And the deeper you go, the messier it gets. You can bring a whole lot to this rescue operation...but you just can't bring order.

H.E.R.O. designed by John Van Ryzin. Currently for the Atari® 2600™ available this summer for major game and home computer systems.

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